



**Royal College of Surgeons in Ireland**

**National Pharmacy Internship Programme**

**Programme Overview**

**2009-2010**

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## Section A - Curriculum Details

### A1 Introduction and Rationale

The minimum education and training requirements for pharmacists as laid down at European Union (EU) level requires the completion of a five-year programme of study that must include a six-month clinical placement in either community or hospital pharmacy. Ireland is the last EU member state that does not award a Masters level pharmacist qualification. In Ireland, education and training of pharmacists heretofore has involved a four year undergraduate programme followed by a one year period of pre-registration in service education and training. This required completion prior to registration with the Pharmacy Regulator (The Pharmaceutical Society of Ireland- PSI). The postgraduate period was informal in structure with no well-defined academic outcomes, was not quality assured and was not mapped to the National Qualification Framework. *The PSI (Education and Training Rules 2008) [SI No. 493 of 2008; Appendix 6]* requires a formal sign-off of academic and professional competency. This necessitates a structured pre-registration education and training programme.

The existing preregistration training programme is now replaced with a one year full-time in service taught programme provided by the Royal College of Surgeons in Ireland (RCSI) with the award of the degree of M Pharm at the end accredited by the PSI. The MPharm degree will form the qualification appropriate for practice and will fulfil academic requirements for registration with the PSI. Successful completion of the four year undergraduate Honours BSc (Pharmacy) or Honours BPharm programme at RCSI, TCD or UCC respectively will be the only route of entry and successful completion of the programme will be the sole route to professional pharmacy practice in Ireland. The proposal originates from a tender request (Appendix 5) by the Pharmacy Regulator for proposals to provide an appropriate interim in-service practical educational programme and the RCSI tender was deemed successful. At present approximately 150 students from the existing three schools of pharmacy complete the four year undergraduate programme annually. All of these students who wish to obtain professional registration will be required to complete this PSI accredited programme, provided by RCSI.

## **A2 Curriculum framework and Programme Structure**

The MPharm qualification is a Master of Pharmacy (NFQ Level 9 Major Award). It is a 12 month, full-time, distance-learning programme conducted over three semesters. Satisfactory completion of six taught modules (including tutor-assessed competency standards), a research dissertation module and a Professional Registration Examination (PRE) will be required. Successful completion of each taught module will attract 10 European Credit Transfer and Accumulation System (ECTS) credits. Module descriptors that contain details of academic content, competency standards, outcomes and assessments are outlined in Section E. The basis for the curriculum is the identification and definition of competence standards that describe the knowledge, skills and behaviours required of a newly-registered pharmacist (Appendix 1). These are mapped to the objectives, learning outcomes and syllabus of the appropriate module. Pharmacy intern performance is assessed by tutor appraisals, in-course assessment and formative and summative assessments. Required competencies are consistent with international norms for pharmacy professional education, for example those of the UK, New Zealand and Canada (Appendix 2). A substantial dissertation (either an organisational development dissertation or a clinical audit) will be required, attracting 30 ECTS credits. There will also be a requirement to complete a Professional Registration Examination to comply with Part 5 of the *PSI (Education and Training) Rules 2008 (The Rules; Appendix 6)*. This will be a terminal assessment which will contain multiple choice questions (MCQ) on pharmacy law and ethics, pharmaceutical calculation and therapeutics and an Objective Structured Clinical Examination (OSCE). This terminal assessment is accounted for in the assessment strategies of each of the taught modules and will be subject to the approval of the Council of the PSI in order to comply with the Rules. The entire programme will carry 90 ECTS credits.

## **A3 Teaching and Learning Strategies:**

The course philosophy is based upon the concept of an outcomes-based graduate model. The School of Pharmacy has developed its current undergraduate programme using such a model. As a result, the programme is structured to reflect a series of competencies that in turn will define the emerging graduate. These are designed to produce a competent and reflective practitioner, with qualifications appropriate for practice.

The overall structure of the programme will comprise practice-based training, block activities, distance learning, formation of an electronic portfolio (E-portfolio) and appropriate assessments.

Pharmacy interns will undertake forty hours education and training per week, of which a minimum of twenty-four hours will require direct contact with a recognised tutor.

Block activities will be structured around core direct learning events, mainly in the form of study days.

The RCSI Virtual Learning Environment (VLE) and RCSI Electronic-Portfolio (E-portfolio; customised for this programme) will provide the core vehicles for delivery

of the distance-learning material. The structures and systems for this are already-well established and RCSI will provide the tutors and pharmacy interns with access to the RCSI library and IT resources. The VLE and E-portfolio will also be the principle platforms for tutor and pharmacy intern support.

The RCSI E portfolio, customised for this programme, will be the main vehicle for tutor and pharmacy intern support. This will, in addition, provide an electronic platform to provide for competence assessment and performance appraisal (CAPA), and internal quality assurance by the programme provider.

Learning communities of pharmacy interns and tutors will be established via the VLE and E-portfolio electronic platforms, facilitating networking and problem solving. This is in keeping with current education research on maximising outcomes by learning through the social domain.

#### **A4 Programme Aims**

The primary aims are as follows.

To ensure that graduates have obtained the designated learning and competencies appropriate for professional practice and that each graduate possesses the academic and professional knowledge and skills to apply competently the following: (as specified in the requirements of the Regulatory Body and as required in the relevant legislation)

- The body of knowledge and skills acquired during the programme leading to the award of the primary degree in pharmacy
- The legislation and the law generally pertaining to pharmacy and to medicinal products and to the practice of pharmacy in Ireland
- The standards of professional conduct and ethics for a person practising as a pharmacist in Ireland

## **A5 Learning outcomes**

On successful completion of the M Pharm programme, graduates will be able to:

- Ensure the safe supply of all medicines to patients
- Evaluate interventions to improve prescribing within the health care team
- Practise pharmacy competently in the primary care setting
- Practise pharmacy competently in the secondary care setting
- Implement a safe, high quality service in all healthcare settings within a clinical governance framework
- Relate pharmacy law and ethics to practice
- Apply information and mastery skills to the provision of health related information
- Implement change within their organisation or complete a clinical audit

## **A6 Core Transferable Skills and their Attributes**

Graduates will possess transferrable skills in two broad areas as follows.

### *Discipline-related skills:*

These are the skills and knowledge in the biomedical sciences and practice areas that allow the graduate to function in a general pharmacy practice setting here or abroad but also in a general pharmaceutical environment such as industry or government services.

### *Practical application skills:*

These are skills in scientific analysis and interpretation, information mastery, communication and management that will equip the graduate to contribute in a wider professional multidisciplinary environment.

## **A7 Entry Requirements**

Successful completion of the BSc (Pharm.) at RCSI, TCD and BPharm at UCC will be the sole route of entry to the Programme. NUI regulations require a minimum of an Honours degree for entry into a Masters programme. Pharmacy graduates with a Pass degree must complete a Qualifying Module prior to entry to the MPharm programme to satisfy entry requirements (See MPQ Module descriptor, page 59).

## Section B Modular Structure

The programme will be delivered full-time over 3 Semesters (Semester 1: October 2009-January 2010; Semester 2: February 2010-May 2010; Semester 3: June 2010-September 2010). The programme is developed in the context of a modular framework and is modelled on the ECTS, incorporating the allocation of credits. The programme offers six taught modules and a research module. Taught modules attract 10 ECTS credits each and the research module attracts 30 ECTS credits. The complete programme will carry 90 ECTS credits. The taught modules (Table 1) each consist of 250 hours of learning, encompassing direct contact, coursework preparation, independent learning formative and summative assessment. Coursework preparation Course work preparation includes direct contact in the workplace, revision for examinations and the preparation and completion of assignments and Eportfolio components. Independent learning involves completion of on-line resource materials including lectures, e-learning resources and indicative syllabus reading

The learning outcomes have been developed as appropriate to Masters level 9 on the National Qualifications Framework, Ireland. Participants who successfully complete the programme will receive the degree of Master of Pharmacy (M Pharm) and will be recognised by the PSI as having fulfilled the requirements for entry to the professional register of the Society and to be eligible to practice as pharmacists.

A pharmacy intern has to undertake seven modules in total. Those pharmacy interns who undertake clinical placement in community pharmacy must complete Module 3a (and not Module 3b), and those pharmacy interns who undertake clinical placement in a hospital pharmacy department must complete Module 3b (and not Module 3a). Those pharmacy interns who undertake a placement structure in both a community pharmacy and a hospital pharmacy department must undertake one module only, which is that aligned to their first clinical placement. There is an elective option for the research component in Module 7. Pharmacy interns can choose between doing a dissertation in organisational development (Module 7a), or complete a clinical audit (Module 7b). Non-clinical placements include those laid out in Rule 17 of the PSI rules.

**Table 1: MPharm Modules**

<b>Module Number</b>	<b>Module Abbreviation</b>	<b>Module Title</b>	<b>Module Delivery</b>	<b>Module Type</b>
Module 1	MP1	Patient care-safe dispensing	Taught	Core
Module 2	MP2	Interprofessional prescribing science	Taught	Core
Module 3a	MP3a	Community practice	Taught	Core*
Module 3b	MP3b	Hospital practice	Taught	Core*
Module 4	MP4	Professional practice	Taught	Core
Module 5	MP5	Patient safety and risk management	Taught	Core
Module 6	MP6	Health and medicine information	Taught	Core
Module 7a	MP7a	Organisational development	Research	Elective
Module 7b	MP7b	Clinical Audit	Research	Elective

\*Pharmacy interns may undertake their clinical placement in either a community pharmacy or a hospital pharmacy department. Those who undertake their placement in a community pharmacy must obtain credits for MP3a and those who undertake their placement in a hospital pharmacy department must obtain the credits for MP3b

## **B1 Modules for placement structures**

The 2008 Rules provide for a number of rotational structures for training in clinical and non-clinical placements. A **clinical placement** is a placement in either a registered retail pharmacy business or the pharmacy department of a hospital with the prior permission of the PSI. **Non-clinical placements include** placements in training establishments that are engaged in specified activities with the prior permission of the PSI Council.

The placement structures, all of 12 months in entire duration (Table 2), facilitated by rotation, when required, by the pharmacy intern.



**Table 2: RCSI Pharmacy Intern. Placement Structures provided for by the PSI (Education and Training Rules) 2008**

<b>Placement Structure</b>	<b>Placement Type</b>	<b>Descriptor</b>
1	Clinical	12 month placement in a community pharmacy
2	Clinical	12 month placement in a hospital pharmacy department
3	Mixed	6 month placement in a community pharmacy followed by 6 month non-clinical placement*
4	Mixed	6 month placement in a hospital pharmacy department followed by 6 month non-clinical placement*
5	Mixed	6 month non-clinical placement* followed by 6 month placement in a community pharmacy
6	Mixed	6 month non-clinical placement followed by 6 month placement in a hospital pharmacy department
7	Clinical	6 month placement in a community pharmacy followed by 6 month placement in a hospital pharmacy department
8	Clinical	6 month placement in a hospital pharmacy department followed by 6 month placement in a community pharmacy

\*Non-clinical placements are conducted in establishments approved by the Pharmacy Regulator as provided for under Rule 17(1) of the *PSI (Education and Training) Rules 2008 (SI 493/2008)*

## **B2 Modules and sequence for placement options**

The modules and the sequence in which they are undertaken depend on placement structure and are set out in Tables 3-8.

**Table 3: Modules and their sequence for Placement Structure 1 (Twelve month placement in a community pharmacy)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP1, MP2, MP3a
Semester 2	MP4, MP5, MP6
Semester 3	MP7a or MP7b

**Table 4: Modules and their sequence for Placement Structure 2 (Twelve month placement in a hospital pharmacy)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP1, MP2, MP3b
Semester 2	MP4, MP5, MP6
Semester 3	MP7a or MP7b

**Table 5: Modules and their sequence for Placement Structure 3 (Six month placement in a community pharmacy followed by 6 month non-clinical placement)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP1, MP2, MP3a
Semester 2	MP4, MP5, MP6
Semester 3	MP7a or MP7b

**Table 6: Modules and their sequence for Placement Structure 4 (Six month placement in a hospital pharmacy followed by 6 month non-clinical placement)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP1, MP2, MP3b
Semester 2	MP4, MP5, MP6
Semester 3	MP7a or MP7b

**Table 7: Modules and their sequence for Placement Structure 5 (Six month non-clinical placement followed by 6 month placement in a community pharmacy)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP4, MP5, MP6
Semester 2	MP1, MP2, MP3a
Semester 3	MP7a or MP7b

**Table 8: Module 2 and their sequence for Placement Structure 6 (Six month non-clinical placement followed by 6 month placement in a hospital pharmacy)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP4, MP5, MP6
Semester 2	MP1, MP2, MP3b
Semester 3	MP7a or MP7b

**Table 9: Modules and their sequence for Placement Structure 7 (Six month placement in a community pharmacy followed by 6 month placement in a hospital pharmacy)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP1, MP2, MP3a
Semester 2	MP4, MP5, MP6
Semester 3	MP7a or MP7b

**Table 10: Modules and their sequence for Placement Structure 8 (Six month placement in a hospital pharmacy followed by 6 month placement in a community pharmacy)**

<i>Semester</i>	<i>Modules</i>
Semester 1	MP1, MP2, MP3b
Semester 2	MP4, MP5, MP6
Semester 3	MP7a or MP7b

## Section C Roles of Tutor and Intern

### C1 Role of tutor

A pharmacy tutor is defined in the *PSI Education and Training Rules 2008* as:

1. a registered pharmacist who has practiced for a minimum of 3 years with a minimum of 1 years experience in the field of pharmacy practice in which he or she intends to act as a tutor pharmacist
2. a registered pharmacist who has completed such programme of education and training as may be set down by the PSI Council from time to time, and
3. a registered pharmacist who meets the standards of knowledge, skills and experience as may be required by the PSI Council from time to time for such pharmacists

In addition, the Rules provide that the PSI Council shall from time to time specify the requisite standards of knowledge, skills and experience required of a registered pharmacist, and the programme of education and training to be completed by a registered pharmacist from time to time, in order that he or she may act as a tutor pharmacist. The RCSI Tutor training programme is accredited by the PSI.

The role of the tutor is to:

- Mentor and guide the intern in the practice of pharmacy
- Provide training opportunities for the intern to gain the skills, attitudes and knowledge required to be a competent pharmacist
- Assess the intern's competence against the Competence Standards

The tutor is responsible for the training of the intern, and the on-going assessments of their competence. The aim of the programme is to ensure that the intern has provided adequate evidence with which to assess his/her performance. The primary responsibility for completion of the designated work lies with the intern – not the tutor. The role of the tutor is to facilitate the intern in attaining adequate competency through provision of opportunities for training and learning. The pivotal role of the tutor is to be a role model for the intern and to inspire and challenge, imbue confidence, and to make fair judgement on intern appraisals.

The tutor should aim for the following:

- To establish clear and open communication with the intern
- To provide regular formal feedback to your intern about their progress. This will involve quiet times specifically set aside when the tutor and intern can discuss the Competence Standards, assess progress, review assigned tasks/assignments. (It is suggested that contact times of 2 h per week or 8 h per month be regarded as the reference criterion).
- To provide guidance on the day-to-day job and training as and when needed

- To give credit where credit is due
- To offer constructive criticism when required
- To monitor intern's work closely on a daily basis so as to be able to assess workplace performance, attitude and behaviours to patients and customers, communication skills and relationships with other team members
- To undertake the appraisals of the intern's progress with reference to the competence standards

Assessment of competence in the Competence Standards of the intern by the tutor takes place on a daily basis but formally through the completion of three appraisal throughout the year, when levels of achievement (on a scale of 0-4) are assigned by the tutor to the intern. The academic component of the M Pharm is monitored through the submission of designated tasks and assignments. Due to the comprehensive nature of the assessment process early indicators that additional support is required can be acted on appropriately.

## **C2 Role of intern**

The M Pharm programme is designed to ensure that interns get the most out of their training year. To fulfil that aim, interns need to be motivated, willing to learn, committed and professional in their attitude. It is important that the intern takes responsibility for their own learning needs in this, their training year, to prepare them for lifelong learning in practice. The tasks assigned as part of the modular structure are designed so that the intern gets as much as possible out of the exercises, and that they provide worthwhile learning experiences. The competence standards provide a useful framework for interns to work from and review their training needs.

It is important that the intern:

- Takes responsibility for their own learning throughout the year
- Makes the most of the opportunities afforded them in terms of exposure to experienced pharmacists and other pharmacy staff during the year
- Completes the assigned tasks and assignments to a high standard
- Manages their time within workplace appropriately and gets academic work completed within the required timeframes
- Strives to get on well with others in their workplace and respects other team members
- Observes propriety and professionalism at all times when dealing with colleagues, patients and other team members

It is advised that interns acquaint themselves in the first instance with the Competence Standards and secondly, with the Modular structure of the programme to provide an overview of what is required (e.g. timelines). If problems are encountered, seek assistance early to avoid escalation of the issue .

## **Section D Competence Standards and their use in the M Pharm Programme**

### **D1 What is a competency?**

Competence is defined as the ability to carry out a job or task. A competency is a quality or characteristic of a person related to effective or superior performance. It comprises several things including knowledge, skills, attitudes, motives, traits and personal skills. A behavioural competency describes typical behaviour observed when effective performers apply motives, traits or skills to job relevant tasks. Different organisations define competency in different ways. Three main models of competence are recognised (Figure 1).

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**1. Outcome (standards) model:** essentially expectations of an individual undertaking a particular area of work or work role i.e. what people need to achieve. This model has its origins in national occupational standards, which form the basis of vocational qualifications (S/NVQs). A task-based competency is often referred to as a competence, and its assessment is criterion referenced.

**2. Educational model:** focuses on what an individual needs to know or be able to do by the end of a period of learning i.e. what people need to possess. These are usually in the form of stated learning outcomes and assessment is usually norm-referenced or grade-related.

**3. Personal model:** deals with the underlying characteristics of an individual that result in effective performance i.e. what people are like. These qualities often relate to knowledge, skills, motives and personal traits. Most commonly applied to management, this model relies on behavioural indicators and is useful in self-assessment and individual development planning

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#### **Figure 1: Broad types of competence\***

\*Adapted from National Skills and Knowledge Framework, NHS 2001 & Guidance on linking the NHS Knowledge and Skills Framework and competences for Pharmacy Policy Development Unit of the Royal Pharmaceutical Society of Great Britain. August 2006

## **D2 Competency Frameworks**

The outcome or standards model relies on the development of a competency framework which encompasses a collection of competencies considered to be central to effective performance. It is a structured mechanism for outlining and linking individual performance to performance in the workplace. The written guide contains a matrix for assessing competence, and for pharmacists, focuses on the competences that pharmacists have or need to develop to perform their work efficiently and effectively. Fundamentally, competency frameworks assist education and training of individuals but can progress to assisting continuous professional development (CPD), performance review, career development, recruitment and selection and change management. In the context of pharmacy, competency frameworks can form the basis for CPD requirements, accreditation (within hospital sector), registration and ultimately link to undergraduate training curricula.

### ***Structure of Competency Frameworks (and terminology)***

The structure of a framework must be clear and user friendly. Key competences (or expected standards) pertaining to a particular job are identified and set out in concise measureable statements. These core competences are referred to in this document as **competency clusters**. Competencies or **elements** associated with key clusters are then stated. Evidence that interns are competent is obtained using a checklist of defined **behavioural descriptors**. These are statements that define how the competency is to be recognised. Tutors and interns must be aware of the key competence clusters, understand the individual competencies and must be aware of the level of performance expected as stated in the behavioural descriptors. In the case of the M Pharm programme, it will be tutors who will appraise interns' performance and achievement of competency.

## **D3 RCSI Pharmacy Intern Competence Standards**

The RCSI Pharmacy Intern Competence Standards were developed using a hybrid approach i.e. several validated competency frameworks (both within and without the pharmacy sector), in addition to relevant literature sources and reports, were reviewed, assessed and distilled to formulate the six core standards. The behavioral descriptors assist pharmacy interns (and their tutors) look at how they do their job, and the outcome model identifies whether someone is effective in a particular area of work. These competence standards (Appendix 1) are central to the effective performance of the pharmacy intern.

The development of RCSI National Internship Competence Standards Framework included full mapping against general level elements of key pharmacy competency lists and frameworks (Appendix 2). The resulting competence standards were piloted in independent clinical and non-clinical accredited training establishments and subsequently amended based on feedback. The resulting competence standards were approved by the Programme Curriculum Board.

### ***RCSI Pharmacy Internship Competence Standards aligned with M Pharm modules***

The 6 competence standards developed were aligned with a specific module comprising the academic content of the MPharm programme.

**Table 11: Competence Standard Titles of the MPharm and their alignment to modules in which they are assessed**

<b>Competence Standards Number</b>	<b>Module in which assessed</b>	<b>Competence Standard Title</b>
CS1	MP1	Patient care: safe dispensing competencies
CS2	MP2	Interprofessional prescribing science competencies
CS3a	MP3a	Community practice competencies
CS3b	MP3b	Hospital practice competencies
CS4	MP4	Professional practice competencies
CS5	MP5	Patient safety and risk management competencies
CS6	MP6	Health and medicine information competencies

### ***Application of RCSI Pharmacy Intern Competence Standards***

This framework will be used by the pharmacy interns, pharmacy tutors and RCSI.

**Pharmacy interns** will use this framework at specified intervals (Tables 13-20) to:

- Develop a learning needs assessment
- Assist interns identify gaps in knowledge and skills and identify training and development needs
- Demonstrate progress in their internship year
- Prepare for their tutor appraisals

**Tutors** will use this framework at specified intervals (Tables 13-20) to:

- Appraise the progress of their interns
- Support the induction process
- Monitor service deliver



- Identify and remedy poor performance

**RCSI** will use this framework on a continual basis (facilitated by continual monitoring analysis through the E portfolio to:

- Provide the link between practice training and academic progress
- Appraise the progress of the interns
- Assess the performance of the interns
- Identify and remedy poor performance as part of the CAPA process
- Underpin competency-led post-graduate training

#### **D4 Assessment of competency**

Assessment of competency aims to ensure that there is **evidence** that behaviour demonstrates competence. In effect, overall competence must be inferred from performance and the methods used must be valid and reliable. Validity is concerned with measuring what is appropriate to measure, while reliability focuses on the reproducibility of the measure employed.

Methods of assessment of competency include the following:

1. Self-assessment
2. Review of written materials (exams, assignments, practice-based reports)
3. Oral examinations (practice-based questions, communication skills, theory in practice, decision-making skills etc.)
4. Clinical examinations e.g. OSCE
5. Evidence of prior learning
6. Observational

The assessment programme for the M Pharm encompasses a mixture of all of these methods of assessment to ensure that the required standards expected of pharmacy interns have been achieved. **Observational assessment** is central to the programme and centres on the interaction between the tutor and the intern. The tutor undertakes appraisal of all aspects of competence against the competence standards at specified time intervals (Tables 13-20) reviewed by, and in conjunction with, the intern. The behavioural descriptors will assist the tutor in not only determining the knowledge and skills attained, but the intern's application to work, their quality of work, and their attitude to customers/patients, attitudes to co-workers and personal behaviour and/or professional attributes. Traditionally these behaviours have been difficult to assess using the educational model which led to the development of competency standards and requirements to attain a level of competency in specified areas.

Several competency frameworks have been developed relating to pharmacy practice both in the primary and secondary care sectors and specific to trainee pharmacists, new practitioners and advanced level practitioners. Supporting evidence of their value has been published in the literature, thus confirming the choice of a competency-based method of education of and training for pharmacy interns in Ireland (Appendix 2).

## Section E Appraisal and assessment of competence standards in the MPharm

Each intern will be appraised against all 6 relevant competence standards in each of the three Semesters. Only appraisal in Semester 3 counts as part of the summative assessment of the aligned module. The assessment rating is on a five-point scale of Levels 0-4 (Level 0: Cannot; Level 1: Never; Level 2; Sometimes; Level 3: Usually and Level 4: Always). On the third appraisal, pharmacy interns are required to have obtained a Level 4 rating on all relevant competency clusters in order to obtain the credits for the relevant module (Appendix 1).

**Table 12: Competence Standards Assessment Ratings\***

Level	Rating	Definition	Percentage expression
0	Cannot	Not applicable in training establishment	0%
1	Never	Very rarely meets the standard expected. No logical thought process appears to apply	0-20%
2	Sometimes	Much more haphazard than “mostly”	21-50%
3	Mostly	Implies standard practice with occasional lapses	51-84%
4	Always	Demonstrates the expected standard practice with very rare lapses	85-100%

\*Adapted with permission from the NHS Competency Development & Evaluation Group (CODEG), General Level Framework –A Framework for Pharmacist Development in General Pharmacy Practice, Second Edition, October 2007

This rating scale was originally developed by the CoDEG group in London who developed the innovative Competency Framework for Pharmacy Practitioners: General Level Handbook. Extensive literature review and consultation with experts deemed this rating scale to be most applicable to the training needs of the pharmacy interns in Ireland, and was thus chosen. It is envisaged that during the year long programme that steady increases in rating levels will be observed in the performance of the interns, commensurate with practice-training and on-the-job experience. Feedback on its use and applicability will be sought by the programme team during the course of the year.

### E1 Appraisal process for Competence Standards

There will be three opportunities through the year for the tutor to rate the competency of the intern at end months 2, 6 and 10. The appraisal templates are available on the VLE and tutors will have to enter their rating in the appropriate box, and submit electronically. The system that has been developed for assessing the standards will involve the intern undertaking a self-assessment of their competency 2 weeks prior to the tutor appraisal, also submitted on line. This will serve to alert interns to their required training or learning needs to facilitate the subsequent tutor appraisal. Prior to submission of the appraisal by the tutor, there will be a comprehensive discussion

format between tutor and intern during which all aspects of the competencies and the modular requirements will be reviewed.

***RCSI Pharmacy Intern Competence Standards sequence for placement structures***

**Table 13: Tutor competence standard appraisal for twelve month placement in a community pharmacy (Placement Structure 1)**

Competence standards appraised	No of months into placement	Semester in which appraisal occurs	Appraisal Number
CSs: 1,2,3a,4,5&6	2	1	1 <sup>#</sup>
CSs: 1,2,3a,4,5&6	6	2	2 <sup>#</sup>
CSs: 1,2,3a,4,5&6	10	3	3*

<sup>#</sup> First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence Assessment and Performance Appraisals) sessions

\*Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

**Table 14: Tutor competence standard appraisal for twelve month placement in a hospital pharmacy (Placement Structure 2)**

Competence standards appraised	No of months into placement	Semester in which appraisal occurs	Appraisal Number
CSs: 1,2,3b,4,5&6	2	1	1 <sup>#</sup>
CSs: 1,2,3b,4,5&6	6	2	2 <sup>#</sup>
CSs: 1,2,3b,4,5&6	10	3	3*

<sup>#</sup> First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence Assessment and Performance Appraisals) sessions

\*Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

**Table 15: Tutors' competence standard appraisal for 6 month placement in a community pharmacy followed by 6 months in a non-clinical placement (Placement Structure 3)**

Competence standards appraised	No. of months from start of year	No. of months from start of placement	Semester in which appraisal occurs	Clinical/ Non-clinical setting	Appraisal Number
CSs: 1,2,3a,4,5 & 6	2	2	1	Clinical	1 <sup>#</sup>
CSs: 1,2&3a	4	4	1	Clinical	2 <sup>#</sup>
CSs: 1,2&3a	6	6	2	Clinical	3*
CSs: 4,5&6	8	2	2	Non-clinical	2 <sup>#</sup>
CSs: 4,5&6	12	6	3	Non-clinical	3*

# First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence Assessment and Performance Appraisals) sessions  
 \*Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

**Table 16: Tutors' competence standard appraisal for 6 month placement in a hospital pharmacy followed by 6 months in a non-clinical placement (Placement Structure 4)**

Competence standards appraised	No. of months from start of year	No. of months from start of placement	Semester in which appraisal occurs	Clinical/ Non-clinical setting	Appraisal Number
CSs:1,2,3b,4,5 &6	2	2	1	Clinical	1 <sup>#</sup>
CSs:1,2&3b	4	4	1	Clinical	2 <sup>#</sup>
CSs:1,2&3b	6	6	2	Clinical	3*
CSs:4,5&6	8	2	2	Non-clinical	2 <sup>#</sup>
CSs:4,5&6	12	6	3	Non-clinical	3*

# First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence Assessment and Performance Appraisals) sessions  
 \*Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

**Table 17: Tutors' competence standard appraisal for 6 months in a non-clinical placement followed by 6 months in a community pharmacy (Placement Option 5)**

Competence standards appraised	No. of months from start of year	No. of months from start of placement	Semester in which appraisal occurs	Clinical/ Non-clinical setting	Appraisal Number
CSs:4, 5&6	2	2	1	Non-clinical	1 <sup>#</sup>
CSs:4, 5&6	6	6	2	Non-clinical	2 <sup>#</sup>
CSs:1,2&3a	8	2	2	Clinical	1 <sup>#</sup>
CSs:1,2&3a	10	4	2	Clinical	2 <sup>#</sup>
CSs:1,2,3a,4,5 & 6	12	6	3	Clinical	3*

# First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence assessment and Performance appraisals) sessions  
 \*Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

**Table 18: Tutors' competence standard appraisal for 6 months in a non-clinical placement followed by 6 months in a hospital pharmacy (Placement Structure 6)**

Competence standards appraised	No. of months from start of year	No. of months from start of placement	Semester in which appraisal occurs	Clinical/ Non-clinical setting	Appraisal Number
CSs:4,5 &6	2	2	1	Non-clinical	1 <sup>#</sup>
CSs:4,5 &6	6	6	2	Non-clinical	2 <sup>#</sup>
CSs:1,2&3b	8	2	2	Clinical	1 <sup>#</sup>
CSs:1,2&3b	10	4	2	Clinical	2 <sup>#</sup>
CSs:1,2,3b,4,5 & 6	12	6	3	Clinical	3 <sup>*</sup>

<sup>#</sup> First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence assessment and Performance appraisals) sessions

<sup>\*</sup>Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

**Table 19: Tutors' competence standard appraisal for 6 months in a community pharmacy followed by 6 months in a hospital pharmacy (Placement Structure 7)**

Competence standards appraised	No. of months from start of year	No. of months from start of placement	Semester in which appraisal occurs	Clinical/ Non-clinical setting	Appraisal Number
CSs:1,2,3a,4,5 &6	2	2	1	Clinical	1 <sup>#</sup>
CS: 3a	4	6	2	Clinical	2 <sup>#</sup>
CS: 3a	6	6	2	Clinical	3 <sup>*</sup>
CSs:1,2, 4,5 &6	6	0	2	Clinical	2 <sup>#</sup>
CS3b	8	2	2	Clinical	1 <sup>#</sup>
CS3b	10	4		Clinical	2 <sup>#</sup>
CSs:1,2,3b,4,5 & 6	12	6	3	Clinical	3 <sup>*</sup>

<sup>#</sup> First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence assessment and Performance appraisals) sessions

<sup>\*</sup>Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

**Table 20: Tutors' competence standard appraisal for 6 months in the hospital pharmacy followed by 6 months in a community pharmacy (Placement Structure 8)**

Competence standards appraised	No. of months from start of year	No. of months from start of placement	Semester in which appraisal occurs	Clinical/ Non-clinical setting	Appraisal Number
CSs:1,2,3b,4,5 &6	2	2	1	Clinical	1 <sup>#</sup>
CS: 3b	4	6	2	Clinical	2 <sup>#</sup>
CS: 3b	6	6	2	Clinical	3*
CSs:1,2,4,5 &6	6	0	2	Clinical	2 <sup>#</sup>
CS3a	8	2	2	Clinical	1 <sup>#</sup>
CS3a	10	4		Clinical	2 <sup>#</sup>
CSs:1,2,3a,4,5 & 6	12	6	3	Clinical	3*

<sup>#</sup> First and second appraisals are not part of the M Pharm assessment but are used as performance indicators at bi-annual CAPA (Competence assessment and Performance appraisals) sessions

\*Third appraisal accounts for workplace assessment in aligned module and pharmacy intern must reach Level 4

## E2 Assessment Methods and Criteria

The role of assessments within the programme is to enable the participants to demonstrate achievement of the specific learning outcomes for the individual modules. A number of different assessments are used to assess a broad level of competencies and to avoid over reliance on one model. Formative assessments include tutor appraisals, the competence assessment & performance appraisal process (CAPA), case moderated studies and E-portfolio assignments. Summative assessments centre on the Professional Registration Examination (PRE).

### **Formative assessments:**

The formative assessment strategy of the M Pharm programme includes tutor appraisals, competence assessment and performance appraisal, case-moderated studies and E-portfolio.

**(a) Tutor appraisals** – Refer to Competence Standards and their use in the M Pharm programme (Section E1)

### **(b) Competence Assessment & Performance Appraisal (CAPA):**

The CAPA process (Competence Assessment and Performance Appraisal) is an evaluation tool which was designed in RCSI to assess the progress of surgeons in training and has now been customised for this programme to assess the progress of pharmacy interns. It addresses the two elements, i.e. competence (what the pharmacy intern is capable of doing, based on defined standards) and performance (what the intern actually does, within the limits of competence).

The CAPA process is completed at appraisal sessions at the end of Semester 1 and is mandatory for all pharmacy interns. However, much of the information used for the appraisal is gleaned from activities and reports which are gathered prior to the appraisal session on the E portfolio.

The CAPA process examines the following areas:

- Pharmacy intern knowledge and professional development (Figure 2)
- Workplace performance (Figure 3)

Information used for the CAPA process is obtained from the pharmacy interns themselves, from the tutors, and from electronic records.

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***RCSI E Portfolio***

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Each pharmacy intern's participation in the M Pharm. programme is electronically monitored and a record of participation will be available at the appraisal session. More importantly, a record of participation in the assignments and other specialised areas will be available.

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***Postgraduate Courses***

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Attendance at educational activities over the year will be noted at the counselling session e.g. attendance at ICCPE lectures

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***Examinations***

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Any formative assessments taken during the year will be noted.

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**Figure 2: Pharmacy intern knowledge and professional development**

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### ***Tutor Appraisal***

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A detailed appraisal will be completed by the tutor in respect of each pharmacy intern using a structured assessment form on the *RCSI E-portfolio*.

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### ***Pharmacy Intern Self-Audits***

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Each trainee is expected to perform a self-assessment on a structured form, using the same criteria that are assessed by the tutor. The self-audits will be completed on the *RCSI E-portfolio*.

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### ***Learning Needs Assessment***

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All pharmacy interns are required to maintain a Learning Needs Assessment relevant to their placement structure on a six monthly basis on the *RCSI E-portfolio*. The function of the Learning Needs Assessment is to encourage pharmacy interns to evaluate their learning needs, plan how to fulfil these needs, act, and record and reflect, in effect to mimic the CPD cycle.

### **Figure 3: Workplace performance**

At the CAPA appraisal meeting, the pharmacy intern will meet a panel of assessors drawn from the field of pharmacy practice, and their performance is discussed with reference to submitted appraisals, E-portfolio and moderated case studies. Shortly after the assessment meeting all pharmacy interns receive electronic notification which will indicate whether the appraisal result was “satisfactory” or “unsatisfactory”. Interns who receive a “satisfactory” appraisal will progress as normal. Interns who receive an unsatisfactory appraisal should arrange to contact the Programme Director to discuss the problem areas and to identify any remedial action required. Any further support needed to implement the remedial action will subsequently be identified.

Interns who continuously receive unsatisfactory assessments following remedial action will be exited from the programme. The College reserves the right to exit interns from the internship where there are serious concerns regarding clinical competence.

The CAPA process is designed to introduce pharmacy interns to a performance appraisal process. It allows them to validate their level of competence and performance and to monitor their progress on an ongoing basis.



***(c) Case-moderated studies***

Case-moderated studies facilitate the sharing of information and analysis through the posting of a case study by an expert in a designated speciality. This has been adapted from the RCSI School of Surgery and will be facilitated on the VLE. This is designed to foster discussion and to encourage pharmacy interns to learn in a social network environment facilitated by the moderator. Pharmacy interns who participate in a meaningful (as determined by the case moderator) way, will be awarded the designated continuous assessment marks of the aligned module (Table 21).

**Table 21: Case-moderated studies as part of formative assessments in specified M Pharm modules**

<b>Module</b>	<b>Case moderated study</b>	<b>% of overall module assessment</b>
MP4	Legal & ethical case study	10%
MP5	Patient safety & risk management	10%
MP6	Critical appraisal case study	10%

***(d) E-Portfolio assignments***

Formative assessment of designated modules will consist of assignments to be completed on templates, submitted through the RCSI E-portfolio. Completed model templates will be made available. The nature of these assignments will depend on the aligned module and are outlined in Table 22.

**Table 22: E-portfolio activities as part of formative assessments in specified M Pharm modules**

<b>Module</b>	<b>E-portfolio assignments</b>	<b>% of overall module assessment</b>
MP1	<b>1.</b> One Learning Needs Assessment -30% <b>2.</b> One extemporaneous preparations -10% <b>3.</b> Two Medication Usage Reviews (MUR-20%)	60%
MP3b	<b>1</b> Three patient profile template-30% (10% each) <b>2</b> One aseptic preparation template -10% <b>3</b> One discharge planning exercise-10% <b>4</b> One new drug evaluation -10%	60%
MP4	<b>1.</b> One Learning Needs Assessment	30%
MP6	<b>1</b> Six Medicine Information Queries (MI) (10% each)	60%

### **Summative assessment**

#### **a) Professional Registration Examination (PRE)**

Eligibility to sit the Professional Registration Examination (PRE) will be as per the requirements determined in Rule 20 of the Rules of the PSI. The overall pass mark for the PRE is 50%.

The syllabus of PRE requires approval by the Council of the PSI and will contain four elements which with are relatively weighted as indicated in Table 23.

**Table 23: Elements of the Professional Registration Examination and their relative weightings**

<b>Elements</b>	<b>Relative Weighting</b>
Multiple choice questions (MCQs) in pharmaceutical calculations*	0.05
Electronic case studies (e-cases) in prescribing science	0.11
Multiple choice questions (MCQs) in pharmacy law & ethics*	0.17
Observed Structured Clinical Examination (OSCE)	0.67

\* These elements of the Professional Registration Examination are required to be all passed independently at a pass mark of 70%

Each of the element of the PRE is accounted for in the summative assessment strategies of the aligned module(s) which are indicated in Table 24.

**Table 24: The elements of the Professional Registration Examination and their aligned module and percentage of overall assessment in aligned module**

<b>PRE Element</b>	<b>Aligned Module</b>	<b>% of overall assessment of each aligned module</b>
MCQ Pharmaceutical calculations	MP1	10%
E-cases prescribing science	MP2	20%
MCQ Pharmacy Law & Ethics	MP4	30%
OSCE*	MP1, 2, 3a or 3b, 4, 5 & 6*	20%

\*Each of the six taught modules has two OSCE stations assigned as part of the module terminal assessment strategy (10% to each station). Each pharmacy intern will whatever their placement structure be required to complete 6 module in total (they will complete wither 3a or 3b depending on whether their clinical placement is in community practice or the pharmaceutical department of a hospital

**b) *Observed Structured Clinical Examination (OSCE):***

Pharmacy interns will be required to visit ten stations, each for a period of five minutes, during which time various tasks will be set, each assessed using a defined marking scheme. A video of an OSCE will be provided to interns to review.

**c) *Dissertation and clinical audit:***

Assessment of dissertations and clinical audits will be based on a matrix that examines the general presentation standard, presentation, analysis and discussion and supervisor assessment. The individual module descriptors (Section D) and the Marks and Standards document (Appendix 1) contain details of individual marking schemes.

## **Section F Educational and library resources**

Delivery methods will be a combination of remote learning (RCSI Virtual Learning Environment (VLE), RCSI electronic portfolio (E-portfolio) and RCSI Colles Portal), workplace training and block attendance. RCSI possesses all of the required educational resources. Pharmacy interns and tutors will have remote access to the aforementioned electronic platforms for the duration of the programme, including email accounts with facilities for interaction with academic staff.

The RCSI library carries a wide range of up-to-date textbooks and periodicals. The VLE permits access to the entire RCSI electronic database, including journals and reference databases. Course material on the VLE will carry links to many of the important required information and teaching resources.

## **Section G Student Supports**

### **G1 Programme support (staff)**

**Mr. Hugh Carroll,**  
**Programme Coordinator**  
E-mail: [hughcarroll@rcsi.ie](mailto:hughcarroll@rcsi.ie)

**Dr. Paul Gallagher,**  
**Programme Director**  
E-mail: [pgallagher@rcsi.ie](mailto:pgallagher@rcsi.ie)

**Dr. Aisling O’Leary,**  
**Programme Director of Studies**  
Director of Academic Affairs  
E-mail: [aisoleary@rcsi.ie](mailto:aisoleary@rcsi.ie)

**Ms Judith Strawbridge,**  
**Programme Director of Student Affairs**  
Student Affairs Director  
E-mail: [jstrawbridge@rcsi.ie](mailto:jstrawbridge@rcsi.ie)

## **G2 Student Support System**

The tutor is the main support for the intern - the vital link between the intern's experience and the programme. Tutors are also an important link with the College if, for example, difficulties begin to affect academic performance or the intern requires specialist support services.

Development of specialist support services, including access to counselling and specialist mental health services, is a priority for RCSI. A Memorandum of Understanding between RCSI and the PSI will ensure that any fitness-to-practice and relevant health issues are managed appropriately. It may take some time to develop the full network of approved counselling services, but every effort will be made to support any intern in difficulty.

### ***As an intern you can expect your tutor***

- ⇒ To provide you with guidance on your progress on the work placement aspects of your programme of study
- ⇒ To provide a 'first line' point of support and guidance on pastoral matters. This may include advising on your rights and/or obligations or referring you to the Programme Coordinator
- ⇒ To respect the confidentiality of matters discussed with you, subject to any overriding duty of disclosure (such as to prevent serious harm to you and/or another staff member or patient).

### ***As an intern you are expected***

- ⇒ To inform your tutor of any difficulties you may be experiencing which might affect your studies, even if you do not require specific help from your tutor, for example because you have approached the Programme Coordinator or a support service directly for help.
- ⇒ To recognise that there may be circumstances in which information must be disclosed (such as to prevent serious harm to you and/or another staff member or patient), and to discuss with your tutor any issues or concerns relating to confidentiality.

### **Major "problems"**

Occasionally an intern will develop a major problem and the Tutor may be consulted by the intern for advice and help. The Student Affairs Director, in collaboration with The Vice Dean for Student affairs and her team, also provide a support role both for interns and tutors by providing advice on regulations and procedures in unusual or complex cases. Some problems can have an effect on academic performance and progress. The Professional Conduct Committee is responsible for overseeing all matters relating to the academic progress of interns.

### ***As an intern you can expect your tutor***

- ⇒ To seek, respecting the confidentiality of matters discussed with you and subject to any overriding duty of disclosure (such as to prevent serious harm to you and/or another staff member or patient) the advice of the Student Affairs Director on your behalf
- ⇒ To advise you of matters which require the approval of the Student Progress Committee
- ⇒ To advise you of the relevant procedure which needs to be followed in a given case
- ⇒ To provide a written report to the Professional Conduct Committee if necessary

### ***As a student you are expected***

- ⇒ To not expect your tutor to give decisions or assurances on matters that can only be decided by the Professional Conduct Committee.

## Section H Programme Evaluation

The quality assurance model set out in the *Universities Act 1997* will be employed. This consists of three strands:

1. Internal quality assurance
2. External quality assurance
3. Quality Improvement Plan

### ***1. Internal Quality Assurance:***

Both summative and formative evaluations will take place on the programme and will be conducted by Ms. Judith Strawbridge (RCSI), Dr. Chris Langley (Aston University) and Professor Keith Wilson (Aston University). Professor Keith Wilson and Dr. Chris Langley have recently conducted an evaluation of the last 5 years of the previous internship programme (PEARS project) and are ideally placed to audit internal quality assurance in this M Pharm Programme. A modified version of Kirkpatrick's model of education outcomes will form the framework for the overall internal programme evaluation (Table 25).

**Table 25: Models of Educational Outcomes (Adapted from the RCSI Institute of Leadership and Healthcare Management)**

1. Reaction	Learner's view of the learning experience
2. Learning	The acquisition of attitudes, skills & knowledge
3. Behavioural Change	Identifies the individual's transfer of learning to their work setting
4. Results	These are related to the programme learning outcomes e.g. increase in level of performance as monitored on the Colles portal though consecutive intern and tutors appraisals

<sup>2</sup> Kirkpatrick DL (1967) In Craig R & Bittel (Eds) *Training and Development handbook*, McGraw-Hill, New York

Pharmacy interns will complete a course evaluation questionnaire at the end of each semester. These will become part of the summative evaluation. Student and lecture representatives, together with the Programme Director will attend a Programme Team meeting, once in each semester. These meetings will provide a forum for feedback on the programme to date and provide qualitative data for the ongoing evaluation on the programme. These details will feed into the formative evaluation of the programme.

### ***2. External Quality Assurance:***

The Pharmacy Regulator will conduct external accreditation of the course as set out in Part 3 of the Rules (Appendix 6). This accreditation procedure will comprise of an international expert in pharmacy education who will chair the visitors committee. For

Year 1 of the programme it is anticipated that there will be several visits to the RCSI. The response and resolutions following reporting of visits will be form part of the on-going quality improvement of the plan

**3. *Quality Improvement Plan:***

On the basis of the information collected from internal quality assurance (formative and summative) and external quality assurance (formative and summative) a Quality Improvement Plan will be developed by the Programme Over-Steering Committee and will be published on the College portal and communicated to the PSI Council, Council of the College and NUI.

**Section I**  
**Module Syllabus**

<b>Module title</b>	<b>MPI. Patient care-safe dispensing</b>	
<b>Level of Award</b>	9	
<b>Credit rating</b>	10	
<b>Module status:</b>	Mandatory (clinical placements only)	
<b>Module Co-Ordinator</b>	Dr. Paul Gallagher	
<b>Rationale for Module</b>		
<p>This module provides an understanding of the professional skills relating to the supply of medicines and how patients use them. There is a major practical component to practice core skills of dispensing, advising and counselling patients (Patient care: safe dispensing Competencies), risk management and medicines usage reviews. It will also allow the intern to fulfill their future statutory obligations as set out in Regulation 9 of the <i>Regulation of Retail Pharmacy Businesses Regulations 2008</i> (SI 488/2008). This module underpins the intern training programme and builds on module 5 (Professional Practice), and integrates with modules 2, 3a and 3b. (Inter-professional prescribing science, community practice and hospital practice respectively). It consolidates the knowledge and skills required for dispensing prescriptions and supplying from hospital kardexes safely. The major themes in this module are safe and appropriate medicine management and patient safety</p>		
<b>Module Aim</b>		
The aim of this module is to ensure that interns can safely supply medicines to patients		
<b>Module Objectives</b>		
<ul style="list-style-type: none"> <li>- Interns will ensure that the dispensing of medicine is performed to a high quality standard consistently and repeatedly</li> <li>- Intern would always ensure patient safety in the supply of medicines</li> </ul>		
<b>Learning Outcomes</b>		
<p>At the end of this module, interns will be able to:</p> <ul style="list-style-type: none"> <li>- Determine safety and suitability of medicines for patient (OSCE)</li> <li>- Manage identified problems and resolve appropriately (Workplace assessment)</li> <li>- Prepare extemporaneous products (Eportfolio)</li> <li>- Demonstrate proficiency in pharmaceutical calculations (MCQ-Terminal)</li> <li>- Conduct a medication usage review (Eportfolio)</li> </ul>		
<b>Hours spent on teaching/Learning Activities:</b>		
Workplace activities		80
Independent Learning Time		92
Coursework preparation		70
Assessment		8
Total		250
<b>Indicative Syllabus:</b>		
<ul style="list-style-type: none"> <li>➤ Patient care: safe dispensing competencies</li> <li>➤ Supervised workplace-based experience</li> <li>➤ E-learning resources: Dispensing and pharmaceutical calculations</li> </ul>		
<b>Assessment</b>		
<b>Examination</b>	<b>Type of Assessment</b>	<b>Weighting</b>
Workplace assessment	Continuous	10*



Eportfolio	Continuous	60
Elearning (calculations)	Terminal (MCQ)	10*
OSCE	Terminal	20
<b>Indicative Reading List:</b>		
<i>Regulation of Retail Pharmacy Businesses Regulations 2008 (SI 488/2008)</i>		
<i>Pharmacy Practice Guidance Manual (Pharmaceutical Society of Ireland, available online)</i>		
<i>Irish Drug Reference-The Directory (IMI, current edition)</i>		
<i>British National Formulary (Pharmaceutical Press, current edition)</i>		
<i>Applied Pharmaceutical Practice (Pharmaceutical Press, current edition); Christopher A Langley &amp; Dawn Belcher</i>		
<i>Fast-track Pharmaceutical Compounding and Dispensing (Pharmaceutical Press. Current edition); Chris Langley &amp; Dawn Belcher</i>		
<i>Pharmaceutical Care Made Easy (Pharmaceutical Press, current edition); John Sexton, Gareth Nickless &amp; Chris Green</i>		
<i>Adverse Drug Reactions (Pharmaceutical Press, current edition); Anne Lee</i>		
<i>Pharmaceutical Calculations Workbook (Pharmaceutical Press, current edition); Judith A Rees &amp; Ian Smith</i>		

<b>Module title</b>	<b>MP2. Interprofessional prescribing science</b>	
<b>Level of Award</b>	9	
<b>Credit rating</b>	10	
<b>Module status:</b>	Mandatory (Clinical placements only)	
<b>Module Co-Ordinator</b>	Judith Strawbridge & Dr Muirne Spooner	
<b>Rationale for Module</b>		
Pharmacists need knowledge of therapeutics and the ability to apply this to clinical decision making as part of the healthcare team. This interprofessional education module promotes interprofessional cooperation and integration through completion of customised cases on-line.		
<b>Module Aim</b>		
The aim of this module is to consolidate knowledge and skills as they apply to the therapeutic management of patients		
<b>Learning Outcomes</b>		
At the end of this module, interns will be able to:		
<ul style="list-style-type: none"> <li>- Advise on the therapeutic management of patient populations (eCases assessment, MCQ, OSCE)</li> <li>- Demonstrate clinical problem solving and decision making (eCases assessment, MCQ, OSCE)</li> <li>- Collaborate with other healthcare professionals (workplace assessment)</li> </ul>		
<b>Hours spent on teaching/Learning Activities:</b>		
Interprofessional eCases		120
Independent Learning Time		120
Assessment		10
Total		250
<b>Indicative Syllabus:</b>		
<ul style="list-style-type: none"> <li>➤ Interprofessional prescribing science competencies</li> <li>➤ Supervised workplace-based experience</li> <li>➤ Interprofessional eCases</li> </ul>		
<b>Assessment</b>		
<b>Examination</b>	<b>Type of Assessment</b>	<b>Weighting</b>
Workplace assessment	Continuous	10*
eCases assessment	Continuous	50
MCQ	Terminal	20
OSCE	Terminal	20
<b>Indicative Reading List:</b>		
<b>Recommended core text:</b>		
<b>FAST track: Therapeutics</b> , Bukhari N & Kearney D, Pharmaceutical Press ISBN 978 0 85369 775 6, 2009		

**Recommended website:**

Irish Medical Formulary (see [www.formulary.ie](http://www.formulary.ie) for details) – Latest edition  
or British National Formulary Latest edition

**Recommended paper:**

Burtke J M, Miller WA, Spencer AP *et al.* ACCP White Paper: Clinical Pharmacist Competencies.  
*Pharmacotherapy* 2008;28(6):806 - 815

**Useful reference texts**

Pharmacy Case Studies  
Soraya Dhillon  
Pharmaceutical Press 2009

Non medical prescribing  
Madesh Sodha & Soraya Dhillon  
Pharmaceutical Press 2009

Clinical Pharmacy and Therapeutics 4<sup>th</sup> ed  
Roger Walker and Catherine Whittlesea  
Churchill Livingstone 2007

Introduction to Renal Therapeutics  
Caroline Ashley  
Pharmaceutical Press 2008

Drugs and the Liver: A guide to drug handling in Liver dysfunction  
Penny North-Lewis  
Pharmaceutical Press 2008

<b>Module title</b>	<b>MP3a. Community practice</b>	
<b>Level of Award</b>	9	
<b>Credit rating</b>	10	
<b>Module status:</b>	Elective (for community pharmacy placements only)	
<b>Module Co-Ordinator</b>	Dr. Paul Gallagher	
<b>Rationale for Module</b>		
<p>The role of the community pharmacist in the provision of primary healthcare on a day-to-day basis to patients is an essential component of pharmacy practice and a valuable contribution to the healthcare needs of the public. Community pharmacists have a central role to play in promoting health and well-being of patients in the community by supporting patients to pursue 'wellness', prevent illness and provide essential treatment and advice for those with short or long-term illnesses. The accessibility of community pharmacies allows ready access by patients to a convenient and informal environment for consultations.</p> <p>This hinges primarily on providing assessment, treatment and advice to individual patients in response to requests pertaining to minor ailments. The ability to deal confidently and appropriately with such requests requires experience and this module is designed to ensure that such patient encounters are optimized through careful training, and where necessary appropriate referral.</p> <p>These responsibilities extend further to the important role of the pharmacist in encouraging and assisting people to take responsibility for their own health and support. Primary public health incorporates the holistic care of patients including attention to lifestyle, diet, health promotion, illness prevention, referral and supply of non-prescription medicines, therapies, diagnostic and therapeutic aids. Therefore this encompasses the treatment, referral and education of patients.</p>		
<b>Module Aim</b>		
The aim of this module is to provide interns with the knowledge and skills to be competent practitioners in the provision of primary care		
<b>Hours spent on teaching/Learning Activities:</b>		
Independent Learning Time	68	
Coursework preparation	150	
Assessment	32	
Total	250	
<b>Indicative Syllabus:</b>		
<ul style="list-style-type: none"> <li>➤ Community Practice Competencies</li> <li>➤ Supervised workplace-based experience</li> <li>➤ On-line e-learning resources – Case-Interact® on <a href="http://www.vle.rcsi.ie">www.vle.rcsi.ie</a></li> <li>➤ First Aid Course</li> </ul>		
<b>Assessment</b>		
<b>Examination</b>	<b>Type of Assessment</b>	<b>Weighting</b>
Workplace assessment	Continuous	10*
E Assessment (Case Interact)	Continuous	60
OSCE	Terminal	20
First-Aid Certificate	Terminal	10*

**Indicative Reading List:****Books:**

*Fast-track Managing symptoms in the pharmacy* (Pharmaceutical Press, current edition); Chris Langley & Dawn Belcher

*Non-prescription Medicines* (Pharmaceutical Press, current edition), Alan Nathan

*Minor Illness or Major Disease? The clinical pharmacist in the community* (Pharmaceutical Press, current edition); Clive Edwards & Paul Stillman

*Community Pharmacy-Symptoms, Diagnosis and Treatment* (Churchill Livingstone, current edition); Paul Rutter

**On-line resources:**

Clinical Knowledge Summaries available at [www.cks.nhs.uk](http://www.cks.nhs.uk) (Login required)

National Library for Health at [www.library.nhs.uk](http://www.library.nhs.uk)

**Primary healthcare:**

RPSGB Guidance on Recording Interventions 2006

**Irish Public health:**

Health promotion unit at [www.healthpromotion.ie](http://www.healthpromotion.ie)

Health Protection Surveillance Centre [www.hpsc.ie](http://www.hpsc.ie)

HSE Public health reports

<b>Module Title</b>	<b>MP3b: Hospital pharmacy practice</b>
Level of award	9
Credit rating	10
Module status	Elective (hospital pharmacy placement only)
Module Co-Ordinator	Dr. Aisling O’Leary
<b>Rationale for the Module</b>	
<p>The role of the hospital pharmacist is to ensure the safe and effective use of medicines for patients under their care. Pharmacy interns require experiential learning in medicines management as it applies in the hospital setting.</p>	
<b>Module Aims</b>	
<p>The aim of this module is to provide interns with the knowledge and skills to be competent practitioners in the provision of medicines use in the secondary care setting and prepare them for specialised practice in tertiary care</p>	
<b>Module Objectives</b>	
<p>That interns will be proficient in the diverse aspects of hospital pharmacy practice including drug procurement, drug dispensing and distribution, medicines information, clinical pharmacy, aseptic dispensing services and medicines management (<i>Note: Medicines Information in Module 6</i>)</p>	
<b>Learning Outcomes</b>	
<p>At the end of this module, the intern should be able to:</p> <ul style="list-style-type: none"> <li>- Understand and use the procedures for drug procurement, stock control and medicines distribution (Workplace assessment)</li> <li>- Advise on the therapeutic management of the in-patient (E-portfolio)</li> <li>- Apply the principles and procedures of aseptic manufacturing (E-portfolio and case-based discussion)</li> <li>- Collaborate with other healthcare professionals (Workplace assessment)</li> <li>- Demonstrate the ability to manage patients in the medical and surgical setting (OSCE)</li> </ul>	
<b>Hours spent on teaching/learning activities</b>	
Independent Learning time	92
Coursework preparation	150
Assessment	8
Total	250
<b>Indicative Syllabus</b>	
<ul style="list-style-type: none"> <li>➤ Hospital Pharmacy Competencies</li> <li>➤ Supervised workplace experience</li> <li>➤ Components of Module 3 applied to hospital pharmacy practice</li> <li>➤ First Aid Course</li> </ul>	

<b>Types of Assessment</b>		
<b>Examination</b>	<b>Type of assessment</b>	<b>Weighting</b>
Workplace assessment	Continuous	10*
First Aid Course	Continuous	10
Eportfolio	Continuous	60
OSCE	Terminal	20
<p><b>Indicative Reading List</b></p> <p>Current Standard Operating Procedures in hospital pharmacy departments</p> <p>Current edition of the British National Formulary</p> <p>Hospital Prescribing Guidelines (where applicable)</p> <p>Hospital Antimicrobial Guidelines (where applicable)</p> <p>Hospital policies and protocols</p> <p>Hospital laboratory reference guidelines</p> <p><b>Books:</b></p> <p>Oxford Handbook of Clinical Pharmacy, current edition</p> <p>Oxford Handbook of Clinical Medicine, current edition</p> <p>Trissel Handbook of Injectable Drugs, current edition</p> <p>Palliative Care Formulary. 3rd edition. Robert Twycross, Andrew Wilcock (Editors-in-Chief) ISBN: 978-0-9552547-1-0</p> <p><b>Useful Papers:</b></p> <p>Burtke J M, Miller WA, Spencer AP <i>et al.</i> ACCP White Paper: Clinical Pharmacist Competencies. <i>Pharmacotherapy</i> 2008;28(6):806 - 815</p> <p>T Grimes on behalf of the Chief Pharmacist in DATHs. Pharmacy Ireland 2020: The vision for hospital pharmacy in Ireland. <i>Irish Pharmacy Journal</i> May 2008; p110</p> <p>5 Minute Guides Series. An Introduction to Medicines Management. 2007. National Prescribing Centre. Available at <a href="http://www.npc.org.uk">www.npc.org.uk</a> (<i>NHS emphasis</i>)</p> <p>SHPA Standards of practice for clinical pharmacy. <i>J Pharm Pract Res.</i> 2005;35(2):122-46. <a href="http://www.shpa.org.au/lib/pdf/practice_standards/clinical_pharm_ro.pdf">http://www.shpa.org.au/lib/pdf/practice_standards/clinical_pharm_ro.pdf</a></p> <p>SHPA Standards of Practice for the Provision of Medication Reconciliation. <i>J Pharm Pract Res</i> 2007; 37 (3): 231-3.</p> <p>Doloresco F, Vermeulen LC. Global survey of hospital pharmacy practice. <i>Am J Health-Syst Pharm.</i> 2009; 66(Suppl 3):S13-9 <a href="http://www.ajhp.org/cgi/reprint/66/5_Supplement_3/s13">http://www.ajhp.org/cgi/reprint/66/5_Supplement_3/s13</a></p> <p>Dooley MJ, Allen KM, Doecke CJ <i>et al.</i> A prospective multicentre study of pharmacist initiated</p>		

changes to drug therapy and patient management in acute care government funded hospitals. Br J Clin Pharmacol 57:4;513-21

Bond CA, Raehl CL. Clinical Pharmacy Services, Pharmacy Staffing and Hospital Mortality Rates. Pharmacotherapy 2007; 27(4): 481-493

**Reports (for references purposes):**

Building a Culture of Patient safety. Report of the Commission on Patient Safety and Quality Assurance. Department of Health and Children. July 2008.(Madden Report) Available at [www.dohc.ie](http://www.dohc.ie) (In particular, refer to Chapter 7, Section 7.4 – Reporting, managing and learning from adverse events; Section 7.5 – Medication Safety.)

A Spoonful of Sugar. Medicines management in NHS Hospitals. London. Audit Commission 2001. Available at [www.doh](http://www.doh).

Medicines Reconciliation. A Guide to Implementation. Available at [http://www.npci.org.uk/medicines\\_management/safety/reconci/library/guide\\_reconciliation.php](http://www.npci.org.uk/medicines_management/safety/reconci/library/guide_reconciliation.php)

NICE/NPSA 2007. Technical patient safety solutions for medicines reconciliation on admission of adults to hospital. Patient safety Guidance 2007: 001. Available at [www.nice.org.uk](http://www.nice.org.uk)

Moving patients, moving medicines, moving safely. Guidance on Discharge and transfer Planning. 2006. Guild of Hospital Pharmacists/The Royal Pharmaceutical Society of Great Britain.

HSE Incident Management Policy and Procedure. September 2008. Available at [www.hseland.ie](http://www.hseland.ie)

A Guide to Medication Review 2008. NPC Plus/Medicines Partnership Programme. National Prescribing Centre. Available at [www.npci.org.uk](http://www.npci.org.uk)

National Patient Safety Association. Guidance for Drug Dispensers 2007. Available at [www.npsa.org](http://www.npsa.org)

WHO Patient Safety Solutions. Series of reports from May 2007 to date.

FIP Global Conference on the Future of Hospital Pharmacy Consensus Statements. Accepted 31/8/2008. Available at [www.fip.org](http://www.fip.org)

**Useful resources:**

Hospital Pharmacists Association of Ireland Special Interest Groups

United Kingdom Clinical Pharmacy Association (UKCPA) (registration required)

United Kingdom Medicines Information Centre [www.ukmi.nhs.uk](http://www.ukmi.nhs.uk)

National Patient Safety Association at [www.npsa.nhs.org](http://www.npsa.nhs.org)

**Journals on line:**

European Journal of Hospital Pharmacy Practice

Hospital Pharmacy Europe

Pharmacy World Science



<b>Module Title</b>	<b>MP4. Professional practice</b>	
Level of award	9	
Credit rating	10	
Module status	Mandatory (for clinical and non-clinical placements)	
Module Co-Ordinator	Dr. Paul Gallagher	
<b>Rationale for the Module</b>		
In order to be competent practitioners pharmacists need to have a thorough understanding of their professional, legal and ethical responsibilities.		
<b>Module Aim</b>		
The aim of this module is to provide a general introduction to Pharmacy Law in Ireland		
<b>Module Objectives</b>		
That interns will gain an understanding of the application of pharmacy law and ethics		
<b>Learning Outcomes</b>		
On successful completion of this module, the pharmacy intern will be able to:		
<ul style="list-style-type: none"> <li>- Demonstrate behaviours that constitute professional practice (Workplace assessment)</li> <li>- show a comprehension of Pharmacy Law (MCQ)</li> <li>- demonstrate behaviours that constitute professional practice (Workplace assessment)</li> <li>- illustrate the application of the Code of Conduct of the Pharmaceutical Society of Ireland (Moderated case study)</li> <li>- Apply the principles of lifelong learning to practice (Eportfolio)</li> <li>- Demonstrate the effective application of Pharmacy Law in a clinical setting (OSCE)</li> </ul>		
<b>Hours spent on teaching/learning activities</b>		
Lectures	15	
Course work preparation	85	
Independent Learning Time	140	
Assessment	10	
<b>Total</b>	<b>250</b>	
<b>Indicative Syllabus</b>		
<ul style="list-style-type: none"> <li>➤ Pharmacy Practice Competencies</li> <li>➤ Supervised workplace-based experience</li> <li>➤ On-line lectures</li> <li>➤ Moderated case study</li> <li>➤ Syllabus Required and approved by the Pharmaceutical Society of Ireland</li> </ul>		
<b>Types of Assessment</b>		
<b>Examination</b>	<b>Type of assessment</b>	<b>Weighting</b>
Workplace assessment	Continuous	10*
Moderated case study	Continuous	10
Eportfolio	Continuous	30
MCQ	Terminal	30*
OSCE	Terminal	20

**Indicative Reading List****Books:**

*Pharmacy Ethics and Decision Making* (Pharmaceutical Press, current edition); Joy Wingfield & David Badcott

*Medical ethics-A case based approach* (Saunders, current edition), Lisa Schwartz, Paul E. Preece & Robert A. Hendry

*Medical ethics and law* (Churchill Livingstone, current edition); Tony Hope, Julian Savulescu & Judith Hendrick

*Medicines and pharmacy law in Ireland* (Churchill Livingstone); Peter B. Weedle & Michael J. Cahill

*Dale and Appelbe's Pharmacy Law and Ethics* (Pharmaceutical Press, current edition); Gordon E. Appelbe and Joy Wingfield

<b>Module title</b>	<b>MP5. Patient safety and risk management</b>	
<b>Level of Award</b>	9	
<b>Credit rating</b>	10	
<b>Module status:</b>	Mandatory	
<b>Module Co-Ordinator</b>	Prof. Ciaran O Boyle & Dr. Paul Gallagher	
<b>Rationale for Module</b>		
<p>There is increasing concern in academic, clinical, political and public arenas, both nationally and internationally, about the serious risks associated with modern healthcare practices. Errors in healthcare can lead to serious injury or even death. A high percentage of preventable medical errors are associated with the use of drugs. Models of error highlight the importance of defence layers in healthcare systems and pharmacists who are a pivotal point of contact with patients have a particular responsibility and opportunity to contribute significantly to improving patient care and reducing errors.</p>		
<b>Module Aims</b>		
<p>The aim of this module is to provide pharmacy interns with the knowledge, skills and attitudes that will translate into appropriate professional behaviours in order to implement a safe, high quality service in all healthcare settings within a clinical governance framework.</p>		
<b>Learning Outcomes:</b>		
<p>At the end of this module, interns will be able to:</p> <ul style="list-style-type: none"> <li>- Relate current theory and practice regarding models of error, risk management and quality improvement in a healthcare setting (assignment)</li> <li>- Critically appraise the models and tools (including the REASON and SHELL Human factor models) associated with error, risk and quality and their application in a healthcare setting</li> <li>- Assess the many sources of information regarding best practice in error prevention, risk management and quality improvement</li> <li>- Demonstrate good communication skills (with patients, relatives and other members of the healthcare team) (OSCE)</li> <li>- Recognize the role and responsibilities of leaders within the healthcare team as advocates for improved and safe healthcare delivery (workplace assessment)</li> <li>- Evaluate the concepts of clinical governance including risk management (workplace assessment)</li> <li>- Demonstrate an awareness of patient's perception of service quality (OSCE)</li> </ul>		
<b>Hours spent on teaching/Learning Activities:</b>		
RCSI Pharmacy Human Factors Course		10
Workplace Learning Activities		80
Coursework preparation		85
Independent Learning Time		67
Assessment		8
Total		250
<b>Indicative Syllabus:</b>		
<b>Pharmacy Human Factors Course</b>		
<ul style="list-style-type: none"> <li>➤ Introduction to patient safety: patient safety and risk management competencies</li> <li>➤ The nature and size of problem of error in healthcare and the role of the pharmacist</li> <li>➤ Models of human factors applied in pharmacy</li> <li>➤ Understanding human factors applied in pharmacy</li> </ul>		

- The role of teams and leadership in creating a culture of patient safety
- Reporting and disclosure
- Understanding and managing risk
- Methods for quality improvement
- Engaging with patients and carers

**Delivery methods**

- Supervised workplace-based experience
- On-line and classroom based lectures
- Moderated case study

**Assessment**

<b>Examination</b>	<b>Type of Assessment</b>	<b>Weighting</b>
Workplace assessment	Continuous	10*
Moderated case study	Continuous	10
Assignment	Continuous	60
OSCE	Terminal	20

**Indicative Reading List:**

**Core material:**

Kohn F.T., Corrigan, J.M. & Donaldson, M.S. (2000) To err is human, Institute of Medicine

World Health Organisation (2004) World Alliance for Patient Safety: Forward Programme

Department of Health and Children (2008) Building a Culture of patient safety, Dublin.

Communication Skills in Pharmacy Practice (Lippincott Williams & Wilkins, current edition); William N. Tindall. Robert S. Beardsley & Carole L. Kimberlin)

**Journals on line:**

International Journal for Quality in Healthcare

Journal of Quality in Clinical Practice

Journal of Quality Management

Quality and Safety in Healthcare

Quality and Management in Healthcare

**Websites:**

National Patient Safety Agency, UK [www.npsa.nhs.uk](http://www.npsa.nhs.uk)

Commission for Healthcare [www.healthcarecommission.org.uk](http://www.healthcarecommission.org.uk)  
Commission on Patient Safety and Quality Assurance Ireland [www.cpsqa.ie](http://www.cpsqa.ie)  
Department of Health and Children [www.dohc.ie](http://www.dohc.ie)  
Department of Health UK [www.dh.gov.uk](http://www.dh.gov.uk)  
Excellence Ireland Quality Association (EIQA) [www.eiqa.com](http://www.eiqa.com)  
Institute of Medicine [www.iom.edu](http://www.iom.edu)  
Pharmacy management [www.pharman.co.uk](http://www.pharman.co.uk)  
The Safety Competencies [www.patientsafetyinstitute.ca](http://www.patientsafetyinstitute.ca)  
World Health Organisation [www.who/patientsafety/en/](http://www.who/patientsafety/en/)

<b>Module title</b>	<b>MP6. Health and medicine information</b>	
<b>Level of Award</b>	9	
<b>Credit rating</b>	10	
<b>Module status:</b>	Mandatory (for clinical and non-clinical placements)	
<b>Module Co-Ordinator</b>	Dr. Aisling O’Leary	
<b>Rationale for Module</b>		
<p>In everyday professional practice, pharmacists are asked questions regarding patients’ health and/or their medicines, by the patients themselves, their carers or by other healthcare professionals. The ability to provide answers to questions/queries efficiently, effectively and in an evidence-based manner is the key rationale for this module. There are countless sources of information from which pharmacists can obtain information. Using these resources properly and being able to access the most useful source to answer a particular question, and to feedback appropriately, are essential skills that interns must and should acquire.</p>		
<b>Module Aims</b>		
<p>The aim of this module is to ensure that interns can provide information efficiently and effectively in response to enquiries about patients’ health and their medicines</p>		
<b>Objectives</b>		
<ul style="list-style-type: none"> <li>- That interns will appreciate how research is generated and the different aspects of clinical research</li> <li>- That interns will acquire the necessary skills to: <ul style="list-style-type: none"> <li>o locate the best or most useful evidence (i.e. information)</li> <li>o interpret and evaluate the information obtained</li> <li>o compile and summarise information</li> <li>o feed back the information obtained in manner that enquirer understands</li> </ul> </li> <li>- That interns will appreciate the need for keeping up to date with developments in research and newly published evidence</li> <li>- That interns will understand how the cost of medicines impacts on healthcare resources</li> </ul>		
<b>Learning Outcomes:</b>		
<p>At the end of this module, interns will be able to:</p> <ul style="list-style-type: none"> <li>- Identify, access and use the most appropriate bibliographical resources, databases and other sources of relevant information in response to queries (Workplace assessment)</li> <li>- Assess the strengths and limitations of information (Moderated case study)</li> <li>- Demonstrate their ability to respond to enquiries and provide information on health and medicines (Eportfolio and OSCE)</li> </ul>		
<b>Hours spent on teaching/Learning Activities:</b>		
Lectures		6
Course work preparation		150
Independent Learning Time		92
Assessment		8
Total		250
<b>Indicative Syllabus:</b>		
<ul style="list-style-type: none"> <li>➤ Health and Medicines Information Competencies</li> </ul>		

- Supervised workplace-based experience
- On-line e-learning resources (Information Seeking and Library Skills at [www.vle.rcsi.ie](http://www.vle.rcsi.ie) )
- Moderated case study
- Recommended tutorials on Medicines Information for pre-registration pharmacists at [www.ukmi.nhs.uk](http://www.ukmi.nhs.uk)

### Assessment

Examination	Type of Assessment	Weighting
Workplace assessment	Continuous	30*
Moderated case study	Continuous	10
E-portfolio	Continuous	40
OSCE	Terminal	20

### Indicative Reading List:

British National Formulary, current edition

BNF for Children, current edition.

Martindale, The Complete Drug Reference. Current edition

Stockley's Drug Interactions, Current edition.

MIMS

UKMI Training Workbook, Current edition 2009.

#### For an appreciation of what constitutes clinical research:

An overview of clinical research: the lay of the land. (Grimes DA, Schulz KF. Lancet. 2002 Jan 5;359(9300) :57-61.)

Epidemiological research resource at [www.bmj.com/epidem/epid.html](http://www.bmj.com/epidem/epid.html)

Types of study design on UKMI at [www.ukmi.nhs.uk](http://www.ukmi.nhs.uk)

What is evidence-based medicine?

<http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/ebm.pdf>

#### For an appreciation of need for, and tools for, appraising published research:

Bandolier on Bias 2001

<http://www.medicine.ox.ac.uk/bandolier/Extraforbando/Bias.pdf>

MeReC Briefing No. 30: Using Evidence to Guide Practice

[http://www.npc.co.uk/ebt/merec/mastery/mast2/resources/merec\\_briefing\\_no30.pdf](http://www.npc.co.uk/ebt/merec/mastery/mast2/resources/merec_briefing_no30.pdf)

MeReC Briefing. Using Evidence to Guide Practice. Supplement to Issue No. 30. Sep 2005 available at

[http://www.npc.co.uk/ebt/merec/mastery/mast2/resources/merec\\_briefing\\_no30\\_suppl.pdf](http://www.npc.co.uk/ebt/merec/mastery/mast2/resources/merec_briefing_no30_suppl.pdf)

Statements governing the reporting of randomised controlled trials (CONSORT guidelines), Available at [www.consort-statement.org](http://www.consort-statement.org); [PRISMA](#) guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)

What is critical appraisal?

[http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What\\_is\\_critical\\_appraisal.pdf](http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What_is_critical_appraisal.pdf)

Trish Greenhalgh. How to Read a Paper: The Basics of Evidence-Based Medicine. Current edition (not mandatory to purchase, series of articles by the author available in journals)

Bandolier's Little Book of Making Sense of the Medical Evidence. Andrew Moore, Henry McQuay . Oxford University Press. (Recommended to purchase)

Building a Culture of Patient safety. Report of the Commission on Patient Safety and Quality Assurance. Department of Health and Children. July 2008.(Madden Report) Available at [www.dohc.ie](http://www.dohc.ie) (In particular, refer to Chapter 7, Section 7.7 – Health information and information technology)

**Cost-effectiveness:**

What is cost-effectiveness?

<http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/Cost-effect.pdf>

What is health economics?

[http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What\\_is\\_health\\_econ.pdf](http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What_is_health_econ.pdf)

What is health technology assessment?

[http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What\\_is\\_health\\_tech.pdf](http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What_is_health_tech.pdf)

**Useful Websites:**

National Medicines Information Centre, St. James' Hospital at [www.nmic.ie](http://www.nmic.ie)

United Kingdom Medicines Information [www.ukmi.nhs.uk](http://www.ukmi.nhs.uk)

National Institute of Clinical Health and Excellence [www.nice.org](http://www.nice.org)

Scottish Intercollegiate Guideline Network at [www.signac.uk](http://www.signac.uk)

Scottish Medicines Consortium at [www.scottishmedicines.org.uk](http://www.scottishmedicines.org.uk)

National Centre for Pharmacoeconomics at [www.ncpe.ie](http://www.ncpe.ie)

Health Information and Quality Authority at [www.hiqa.ie](http://www.hiqa.ie)

Central Statistics Office at [www.cso.ie](http://www.cso.ie)



<b>Module title</b>	<b>MP7a. Organisational development dissertation</b>	
<b>Level of Award</b>	9	
<b>Credit rating</b>	30	
<b>Module status:</b>	Elective (Either Module 7a or 7b)	
<b>Module Co-Ordinator</b>	Prof. Ciaran O Boyle/ Paul Gallagher	
<b>Rationale for Module</b>		
Change management and organizational development is a central feature of the modern pharmacy environment. The increasing emphasis on; continuous quality improvement, fiscal responsibility and attainment of standards, requires pharmacists to have the skills and knowledge to shape and adapt to this dynamic environment.		
<b>Module Aims</b>		
The aim of this module is to ensure that interns can apply their knowledge of change management and evidence based practice to a change issue relevant to their training establishment.		
<b>Learning Outcomes:</b>		
At the end of this module, interns will be able to:		
<ul style="list-style-type: none"> <li>- Discuss and debate different approaches to change management and organizational development</li> <li>- Carry out and manage a change management/organisational development project</li> <li>- Reflect upon the experience of carrying out the project</li> <li>- Prepare a poster for the presentation and dissemination of a project</li> <li>- Demonstrate the ability to apply change management/organizational development theory to their organization and/or training establishment</li> </ul>		
<b>Hours spent on teaching/Learning Activities:</b>		
Workshop		5
Course work preparation		645
Independent Learning Time		85
Supervision		15
Total		750
<b>Indicative Syllabus:</b>		
<ul style="list-style-type: none"> <li>➤ Review of change management theory</li> <li>➤ Review of change management tools and techniques</li> <li>➤ Overview of project management</li> <li>➤ Reflective practice</li> <li>➤ Dissemination of findings</li> </ul>		

**Indicative Reading List:**

Gibbs, G. (1998) Learning by Doing: A Guide to Teaching and Learning Methods, Further Education Unit, Oxford Brookes University, Oxford. Available @ [www2.glos.ac.uk/GDN/gibbs/](http://www2.glos.ac.uk/GDN/gibbs/)

Kotter, J. (1995) Leading Change: Why Transformation Efforts Fail, Harvard Business Review, March-April: 59-67

Roberts, A., Benrimoj, C., Dunphy, D., & Palmer, I. (2008) Community pharmacy: strategic change management, McGraw-Hill Medical Australia Pty. Available @ [www.mcgraw-hill.co.uk/](http://www.mcgraw-hill.co.uk/)

**Additional Reading:**

Revans, R. (1983), ABC of Action Learning. Chartwell-Bratt, London

Quinn F.M. (1998) Reflection and reflective practice. In Continuing Professional Development in Nursing: A Guide for Practitioners and Educators (Quinn F.M. ed.), Stanley Thorne (Publishers) Ltd, Cheltenham, pp.121-145

TOHM (2003) Action Learning. The Office of Health Management, Dublin, Ireland

Bolton, G. (2005) Reflective Practice. Writing and Professional Development, Sage, London

Martin, V. (2002) Managing projects in health and social care. Routledge, London

**Articles:**

HSE (2008) Improving our services: A Users' Guide to Managing Change in the Health Service Executive. Health Service Executive, Dublin

Kotter, J. (1995) Leading Change: Why Transformation Efforts Fail, Harvard Business review, March-April: 59-67.

**Websites:**

Hseland.IE, the Change Hub [www.hseland.ie/lcdnn/Home/tabid/36/Default.aspx](http://www.hseland.ie/lcdnn/Home/tabid/36/Default.aspx)

NHS Connecting for Health Change Management

[www.connectingforhealth.nhs.uk/systemsandservices/capability/phi/personal/learningweb/leadership/](http://www.connectingforhealth.nhs.uk/systemsandservices/capability/phi/personal/learningweb/leadership/)

<b>Module Title</b>	<b>MP7b: Clinical audit project</b>
<b>Level of Award</b>	9
<b>Credit rating</b>	30
<b>Module status</b>	Elective (Either Module 7a or 7b)
<b>Module Co-Ordinator</b>	Dr. Aisling O’Leary
<b>Rationale for Module</b>	
<p>Quality improvement processes through clinical audit aim to improve patient care and outcomes through systematic review of care and the implementation of change. Pharmacists, as valuable healthcare providers, should lead change in therapeutic or service delivery through conducting clinical audits.</p>	
<b>Module Aim</b>	
<p>The aim of this module is to ensure that interns develop the skills to undertake a full audit cycle in the workplace aimed at improving patient care or service delivery and prepare a written report of their findings. The chosen audit will focus on structures, processes or outcomes and result in a change that impact positively on patient care. Topics for audit should reflect issues of relevance at a national, workplace, or organisational level and/or focus on pharmacy practice delivery.</p>	
<b>Learning Outcomes</b>	
<p>Interns will:</p> <ul style="list-style-type: none"> <li>- Understand and use best practice guidelines for clinical audit and the clinical audit cycle</li> <li>- Source criteria for benchmarking their audit or standards for audit evaluation through systematic review of the literature (or develop appropriate reference criteria in the absence of published literature with appropriate experts)</li> <li>- Demonstrate the ability to project manage the audit from inception to completion</li> <li>- Prepare and produce a written report of their findings</li> <li>- Prepare a poster for presentation</li> </ul>	
<b>Hours spent on teaching/learning activities</b>	
Interactive workshop	5
Course work preparation	500
Independent learning time	80
Supervision	15
Total	750
<b>Indicative Syllabus</b>	
<ul style="list-style-type: none"> <li>➤ Clinical audit training day - Principles of clinical audit</li> <li>➤ Audit proposal feedback</li> <li>➤ Pilot testing</li> <li>➤ Data collection</li> <li>➤ Data analysis</li> <li>➤ Writing up report</li> </ul>	

➤ Preparation of poster

### **Assessment**

Written report and poster presentation – Continuous

### **Indicative Reading List**

Principles for best practice in clinical audit. National Institute for Clinical Health and Excellence 2008.

[http://www.nice.org.uk/usingguidance/implementationtools/auditadvice/audit\\_advice.jsp?do\\_media=1&mid=79613703-19B9-E0B5-D4F14A0429022FC0](http://www.nice.org.uk/usingguidance/implementationtools/auditadvice/audit_advice.jsp?do_media=1&mid=79613703-19B9-E0B5-D4F14A0429022FC0)

Building a Culture of Patient safety. Report of the Commission on Patient Safety and Quality Assurance. Department of Health and Children. July 2008. (Madden Report) Chapter 7 - Quality Improvement and Learning Systems, Sections 7.1-7.3, beginning p. 147. Available at [www.dohc.ie](http://www.dohc.ie)

#### **Journal articles:**

What is clinical audit?

<http://www.ospfe.it/attach/qualita/docs/whatisclinaudit.pdf>

Ruthven T and Ashmore S, Significant event audits can help pharmacists to identify weaknesses and make positive changes rapidly, Pharmacy Today, June 2007

Ashmore S and Johnson T, How best to tackle a clinical audit, Pharmacy in Practice, March 2006, pp51-55

Ashmore S and Johnson T, Enthusiastic and organised teams will produce successful clinical audit, Pharmacy in Practice, May 2006, pp110-113

Ashmore S and Johnson T, Analysing clinical audit data can reveal where change is needed, Pharmacy in Practice, August 2006, pp130-132

Panton R, Fitzpatrick R. The involvement of pharmacists in professional and clinical audit in the UK: a review and assessment of their potential role. J Eval Clin Pract. 1996 Aug; 2(3):193-8.

#### **Selected published audits:**

Benrimoj SI, Werner JB, Raffaele C, Roberts AS. A system for monitoring quality standards in the provision of non-prescription medicines from Australian community pharmacies. Pharm World Sci. 2008 Apr; 30(2):147-53. Epub 2007 Oct 16.

CM, Valk GD, Griffin SJ, Wagner E, van Eijk JT, Assendelft WJJ. Interventions to improve the management of diabetes mellitus in primary care, outpatient and community settings. Cochrane Database of Systematic Reviews 2000, Issue 4. Art. No.: CD001481. DOI: 10.1002/14651858.CD001481

Pulver LK, Tett SE, Coombes J. The Queensland experience of participation in a national drug use evaluation project, Community-Acquired Pneumonia - Towards improving outcomes nationally (CAPTION). BMC Pulm Med. 2009 Aug 3;9(1):38

Drew RH. Antimicrobial stewardship programs: how to start and steer a successful program. J Manag Care Pharm. 2009 Mar; 15(2 Suppl):S18-23.

Pippins JR, Gandhi TK, Hamann C, Ndumele CD, Labonville SA, Diedrichsen EK, Carty MG, Karson AS, Bhan I, Coley CM, Liang CL, Turchin A, McCarthy PC, Schnipper JL. Classifying and predicting errors of inpatient medication reconciliation. *J Gen Intern Med.* 2008 Sep;23(9):1414-22. Epub 2008 Jun 19.

Kamrar M, Johnson BJ, McAnaw JJ, Lemmens-Gruber R, Hudson SA. Adherence to clinical guidelines in the prevention of coronary heart disease in type II diabetes mellitus. *Pharm World Sci.* 2008 Jan; 30(1):120-7. Epub 2007 Aug 25

Radford A, Undre S, Alkhamisi NA, Darzi SA. Recording of drug allergies: are we doing enough? *J Eval Clin Pract.* 2007 Feb;13(1):130-7

**Websites:**

Guideline and Audit Implementation Network (GAIN) at <http://www.gain-ni.org/>

<b>Module Title</b>	<b>MPQ: Integrated Pharmacy - Qualifying Entry Module</b>
<b>Level of Award</b>	8
<b>Credit rating</b>	5
<b>Module status</b>	Mandatory (for Qualifying Entry graduates only)
<b>Module Co-Ordinator</b>	Dr. James Barlow & Ms. Judith Strawbridge
<b>Rationale for Module</b>	
To provide a platform for integration of pharmacy knowledge and skills attained in the undergraduate training period. Graduates will be expected to extract and apply their pharmacy knowledge from the entire 4 years of their undergraduate degree programme.	
<b>Module Aim</b>	
The aim of this module is to allow students to demonstrate the ability to assimilate and apply the knowledge and skills obtained in their undergraduate degree programme to satisfy a level of competence required for entry into the MPharm Programme.	
<b>Learning Outcomes</b>	
On completion of the module the student will be able to:	
<ul style="list-style-type: none"> <li>- Understand the key roles of the pharmacist as they apply in the therapeutic management of the patient within the multidisciplinary healthcare team</li> <li>- Appreciate how the integration of pharmacy knowledge and skills is necessary for pharmacists regardless of their sector of employment</li> <li>- Be able to extract and apply pharmacy knowledge from previous modules</li> <li>- To consolidate professional skills alongside scientific learning</li> <li>- Be able to recognise professional and ethical responsibilities</li> <li>- Improve oral communication skills</li> </ul>	
<b>Hours spent on teaching/learning activities</b>	
Lectures	3
Independent learning time	75
Specified learning activities	47
Total	125
<b>Indicative Syllabus</b>	
➤ Integrated pharmacy tutorials and case work	
<b>Assessment</b>	
Objective Structured Clinical Examination (OSCE) – Terminal	
<b>Indicative Reading List</b>	
Tutorial support material	

**1. Appendix 1**

***RCSI Pharmacy Intern Competence Standards***



*RCSI Internship Competence Standard 1 (2009-2010)*  
**Patient care-safe dispensing competencies**

**CS1 Clusters**

- 1 Obtains individual patient history**
- 2 Interprets information about medicines**
- 3 Reviews the medicine therapy of individual patients**
- 4 Optimises drug therapy**
- 5 Prepares the medicines**
- 6 Documents the prescription**
- 7 Distribution**
- 8 Addresses compliance issues with patients**



## **Cluster 1      Obtains individual patient history**

### **1.1      Accesses patient medication records/notes**

#### **Behavioural descriptors:**

- 1.1.1. Effectively uses record on pharmacy computer/patient medical notes/ animal records
- 1.1.2. Obtains copies of records (computer/hard copy) from other health professionals

### **1.2      Interviews individual patient or their caregivers and/or other health professionals to obtain history of medicines and other therapies, if necessary**

#### **Behavioural descriptors:**

- 1.2.1. Obtains patient medication history of prescription and non-prescription medication, complementary therapies and compliance details
- 1.2.2. Interviews patient in a competent manner to obtain medical history and assess suitability of medication
- 1.2.3. Interviews patient in a manner consistent with legal requirement in order to determine whether they are satisfied to issue medicine without prescription on the basis of an emergency supply at the request of a patient
- 1.2.4. Conducts conversation with prescriber in a manner consistent with legal requirement in order to determine whether they are satisfied to issue medicine/ animal remedy on the basis of an emergency supply

## **Cluster 2      Interprets information about medicines**

### **2.1      Identifies common medicines by their International Non-Proprietary Name (INN), branded generic name or trade name**

#### **Behavioural descriptors:**

- 2.1.1. If given one form of a common medicine name, promptly identifies other forms reference sources (e.g. BNF, SPC, Irish Medicine Board portal-*imb.ie*, IPHA portal-*medicines.ie*)

### **2.2      Interprets generic equivalence of medicines from different manufacturers**

#### **Behavioural descriptors:**

- 2.2.1. Can determine brand equivalence from readily available reference sources

## **Cluster 3      Reviews the medicine therapy of individual patients**

### **3.1      Interprets individual patient's medical history and medicine records**

#### **Behavioural descriptors:**

- 3.1.1. Can explain possible purpose of each medicine

### **3.2      For each medicine, checks the dosages and methods of administration are optimal**

#### **Behavioural descriptors:**

- 3.2.1. Assesses efficacy and safety of medicine recognizing pharmacokinetic factors e.g. age, weight, pregnancy, other co-existing therapies
- 3.2.2. Assesses efficacy and safety of medicine with regard to all relevant alerts (IMB, PSI, NMIC) including the recognition of toxicity factors (e.g. methotrexate)
- 3.2.3. Assesses the suitability of dosage form with respect to efficacy, safety and concordance, e.g. tablets in a child, inhaler device for asthmatic

### **3.2 Identifies which adverse drug reactions (ADRs) should be reported to the Irish Medicine Board and facilitates the reporting of these**

#### **Behavioural descriptors:**

- 3.3.1. Identifies reportable ADRs and facilitates reporting of these (e.g. on line forms to IMB)

## Cluster 4 Optimises drug therapies

### 4.1 Identifies necessary changes to medicine therapy

#### **Behavioural descriptors:**

- 4.1.1. Recognises possible adverse drug reactions presenting by the patient and takes appropriate action
- 4.1.2. Recognises possible over-dosage and takes appropriate action
- 4.1.3. Recognises clinically significant interactions and is able to take appropriate action (including use of reference material such as *Stockley's Drug Interactions* and relevant interaction dispensing software)
- 4.1.4. Recognises contra-indications as per the Summary of Products Characteristics (SPC) and is able to take appropriate action
- 4.1.5. Recognises clinically significant interactions with pharmacy supervised medicine (PS), General Sales List medicines (GSL) and complementary therapies and is able to take intervene appropriately

### 4.2 Recommends the optimal medicine, dose form and method of administration for the patient

#### **Behavioural descriptors:**

- 4.2.1. If necessary, calculates optimal medicine dose for patient and advises prescriber and patient of same
- 4.2.2. For specific medicines, makes recommendations, including dose forms, formulations and methods of administration
- 4.2.3 Uses research evidence to inform medicines management (*cf* Module 6 & CS6)

### 4.3 Monitors the medicine therapy of individual patients

#### **Behavioural descriptors:**

- 4.3.1. Recognises patients' symptoms that indicate medicine therapy should be monitored e.g. patient on warfarin is bruising easily; patient on methotrexate develops sore throat, patient on ACE inhibitor develops dry cough
- 4.3.2. Liaises with methadone clinic re monitoring doses in patients
- 4.3.3. Ensures appropriate laboratory tests for therapies that require monitoring, e.g. lithium and Li levels, Carbimazole and FBC, warfarin and INR, TDM of antibiotics of narrow therapeutic index etc.
- 4.3.4. Interprets results of laboratory tests and applies to individual therapy recommendations e.g. blood tests for lipid lowering agents, gentamicin dosing, warfarin dosing, methotrexate monitoring etc.

### 4.4 Solves problems

#### **Behavioural descriptors:**

- 4.4.1. Recognises and defines actual problems in the patient's prescribed drug therapy, lifestyle or quality of life
- 4.4.2. Identifies workable options to solve problems in the patient's prescribed drug therapy, lifestyle or quality of life, based on appropriate evidence, sound analysis and patient's wishes
- 4.4.3. Refers the patient, when necessary, to a more appropriate source of help or information
- 4.4.4. Takes responsibility for, and accepts outcomes of, own advice or decisions

## Cluster 5 Prepares the medicines

### 5.1 Reading, checking and interpretation

#### **Behavioural descriptors:**

- 5.1.1. Checks that the prescription for human medicine/animal remedy is legible and if not can verify by taking appropriate action
- 5.1.2. Confirms that the prescription for human medicine/animal remedy conforms to legal requirement as set out in the relevant legislation (*Medicinal Products (Prescription and Control of Supply) Regulations, 2003-2008; Misuse of Drug Regulations, 1988-2008; Misuse of Drugs (Supervision of Prescription and Supply of Methadone) Regulations, 1988 & European Communities (Animal Remedies) (No 2) Regulations 2007*)
- 5.1.3. Acts appropriately if prescription does not meet all necessary legal requirements
- 5.1.4. Identifies the legal category of the medicines to be dispensed (e.g. S1P1, S1P2, S1A, S1B, S1C, CD2, CD3, CD4, CD5, VPO-1, VPO, POM, POM (E), PS & LM)
- 5.1.5. Applies correctly the requirement around the legal categories to the dispensing process
- 5.1.6. Applies all relevant community drug schemes, hardship scheme, methadone protocol, High-Tech. scheme and local schemes (e.g. psychiatric) /arrangements
- 5.1.7. Detects forged prescriptions and intervenes appropriately as per legal requirements and workplace guidelines
- 5.1.8. Selects the correct strength of the relevant dosage form and if several strengths are available can follow the guidance in the BNF (General guidance-strengths and quantities)
- 5.1.9. Selects the correct quantity and follows workplace protocol with regard to what constitutes one month supply (28 or 30)
- 5.1.10. Checks the amount and frequency of the dose prescribed and pays particular attention to paediatric doses and can reference in the BNF for Children (BNFc)
- 5.1.11. Can safely give instructions with regards to directions for use

### 5.2 Selects the medicine

#### **Behavioural descriptors:**

- 5.2.1. Selects and verifies the appropriate drug from stock and displays knowledge of generic, parallel imports medicines and for robotic dispensing, display knowledge of limitations of automatic processes
- 5.2.2. Selects the appropriate drug from stock that is eligible for reimbursement under various community drug schemes
- 5.2.3. Applies reference pricing to drug selection as per HSE instruction
- 5.2.4. Displays a knowledge of how drugs are stored (alphabetically, therapeutic category, generically)
- 5.2.5. Identifies promptly where to retrieve medicines (e.g. Duac® in fridge, Ritalin® in controlled drug safe)
- 5.2.6. Sources and procures unlicensed medicines (ULM)
- 5.2.7. Ensures medicine meets all quality requirements (e.g. not tampered with, in date, stored at correct temperature etc.)

### 5.3 Prepares extemporaneous formulations

#### **Behavioural descriptors:**

- 5.3.1. Performs correct calculations for extemporaneous compounding
- 5.3.2. Complies with legal requirement and recommendations for extemporaneous dispensing as per *Medicinal Products (Control of Placing on the Market) Regulations 2007* and the *PSI Pharmacy Practice Manual-A Self Audit Tool for Pharmacists and Pharmacy Owners*
- 5.3.3. Prepares acceptable worksheets for extemporaneous dispensing
- 5.3.4. Performs extemporaneous dispensing in a timely fashion
- 5.3.5. Procures extemporaneous medicines from a specialist manufacturer when required

## 5.4 Presents the medicine

### Behavioural descriptors:

- 5.4.1. Presents the medicine in such a way as to prevent accidents
- 5.4.2. Presents the medicine in such a way as to preserve the medicine from deterioration
- 5.4.3. Presents the medicine in such a way as to optimise compliance (e.g. Thalidomide Pharmion® Patient Programme)

## 5.5 Labels the medicine

### Behavioural descriptors:

- 5.5.1. Verifies cautionary labels on medicines as per relevant legal source (SPC and Schedule 5 of the *Medicinal Products (Prescription and Control of Supply) Regulations, 2003-2008*)
- 5.5.2. Verifies that labels for extemporaneous medicines contain date of manufacture, appropriate expiry date and batch number
- 5.5.3. Verifies that medicines/animal remedies supplied under emergency supply provision of legislation contains the word “*Emergency Supply*”
- 5.5.4. Ensures that directions are clear and precise in order to ensure compliance

## Cluster 6 Documents the prescription

### 6.1 Endorses the prescription

#### Behavioural descriptors:

- 6.1.1. Endorses a prescription when fully and/or partly dispensed

### 6.2 Records prescription and interventions

#### Behavioural descriptors:

- 6.2.1. Maintains prescription records either in the form of a prescription book or an end of day prints off
- 6.2.2. Complies with *Misuse of Drugs (Supervision of Prescription and Supply of Methadone) Regulations, 1998* with regard to records (e.g. drugs are entered in the CD register and CD stock balanced)
- 6.2.3. Complies with *Misuse of Drugs (Supervision of Prescription and Supply of Methadone) Regulations, 1998* with regard to records
- 6.2.4. Complies with *Medicinal Products (Prescription and Control of Supply) Regulations, 2003-2008* with regards to records
- 6.2.5. Complies with legal record requirements for medicines/animal remedies issued on the basis of an emergency supply
- 6.2.6. Records all interventions with prescribers with regards to dispensing of prescriptions

### 6.3 Maintains privacy and security of patient medical records and information

#### Behavioural descriptors:

- 6.3.1 Complies with *Data Protection Act 1988, Data Protection (Amendment) Act 2003, PSI Pharmacy Practice Manual-A Self Audit Tool for Pharmacists and Pharmacy Owners* and workplace procedures regarding security of patient information

### 6.4 Displays an understanding of budgeting and reimbursement of medicines

#### Behavioural descriptors:

- 6.4.1. Displays a knowledge of how prescribing affects healthcare costs
- 6.4.2. Demonstrates knowledge of how medicines are priced in Ireland
- 6.4.3. Displays a knowledge of community drugs schemes and the role of the Primary Care Reimbursement Services
- 6.4.4. Collates relevant claim forms and sends in hard and electronic copies to relevant reimbursement authority (e.g. PCRS)

## **Cluster 7      Distribution**

### **7.1      Rotates medicines**

#### **Behavioural descriptors:**

- 7.1.1. Develops and/or complies with SOPs for stock rotation
- 7.1.2. Develops and/or complies with SOPs for stock storage
- 7.1.3. Develops and/or complies with SOPs for stock reconciliation

### **7.2      Disposes of expired and used medicine**

#### **Behavioural descriptors:**

- 7.2.1. Safely disposes of expired or returned medicine in accordance with the appropriate health and safety and environmental protection legislation

### **7.3      Recall of medicines**

#### **Behavioural descriptors:**

- 7.3.1. Co-operates with corrective action conducted by the manufacturer, wholesaler or IMB (e.g. recall of batch of medicine)

## **Cluster 8      Addresses compliance issues with patients**

### **8.1      Communicates with the patient effectively**

#### **Behavioural descriptors:**

- 8.1.1. Elicits, listens and reflects on the patient's beliefs about their prescription medicines
- 8.1.2. Addresses the patient's concerns about their prescription medicines and taking them in a concordant manner
- 8.1.3. Encourages the patient to ask questions about their prescription medicines and associated aspects of health
- 8.1.4. Explains clearly to the patient the rationale for, and benefits of, their proposed or continuing prescription medicines
- 8.1.5. Promotes patient compliance (e.g. monitored dosage systems)
- 8.1.6. Advocates for the patient on medication issues, when necessary



***RCSI Internship Competence Standard 2 (2009-2010)***

**Interprofessional Prescribing Science competencies**

**CS2 Clusters**

- 1 Management of patient populations**
- 2 Clinical decision making and problem-solving**
- 3 Collaborating with healthcare professionals**

## **Cluster 1      Management of patient populations**

### **1.1      Knows the pharmacotherapy of the following disease states:**

**Bone and joint diseases** (Osteoporosis, Osteoarthritis, Rheumatoid Arthritis, Gout)

**Cardiovascular** (Hypertension, Heart failure, Coronary artery disease, Acute coronary syndromes, Atrial fibrillation, Thromboembolic disorders, Dyslipidaemias, Stroke)

**Dermatological**

**Endocrine** (Diabetes mellitus, Hypothyroidism, Hyperthyroidism)

**Gastrointestinal** (Gastrooesophageal reflux disease, Nausea & vomiting, Peptic ulcer disease, Hepatitis, Cirrhosis, Inflammatory bowel disease)

**Genitourinary** (Prostate hypertrophy, Urinary incontinence)

**Haematologic** (Anaemia)

**Immunologic** (Hypersensitivity reactions, Organ transplantation)

**Infectious diseases** (Hospital acquired infections, Soft tissue and bone infections, Infectious endocarditis, Respiratory tract infections, Genitourinary infections)

**Mental Health** (Drug and alcohol abuse, Anxiety disorders, Attention-deficit-hyperactivity disorder, Depression, Schizophrenia, Bipolar disorder)

**Neurologic** (Epilepsy, Acute pain management, Chronic pain management, Parkinson's disease, Dementia)

**Pulmonary** (Asthma, Chronic obstructive pulmonary disease, Cystic fibrosis)

**Renal Disorders** (Acute renal failure, chronic renal failure)

#### **Behavioural descriptors:**

1.1.1. Can apply pharmacokinetic and pharmacodynamic principles to the disease states listed

1.1.2. Appreciates that patients who are young, old, have co-morbidities, are pregnant or breast-feeding require special consideration

## **Cluster 2      Clinical decision making and problem-solving**

### **2.1      Reviews the pharmacotherapy of the individual patient**

#### **Behavioural descriptors:**

2.1.1. Determines the appropriate pharmacotherapy of the patient when evaluating an individual patient's drug therapy.

2.1.2. Determines the pharmacotherapy of disease states, not listed in CS2 Cluster 1, when necessary

### **2.2      Designs a comprehensive drug therapy plan for patient-specific problems**

#### **Behavioural descriptors:**

2.2.1. Considers non-pharmacological therapeutic options

2.2.2. Selects optimal drug, dose, route, frequency and duration of therapy

2.2.3. Incorporates the significance of potential drug interactions and adverse effects into the recommended plan

2.2.4. Justifies recommendations base on patient-specific, evidence based, therapeutic considerations (pharmacology, pharmacokinetics & pharmacodynamics)

### **2.3      Decision making**

#### **Behavioural descriptors:**

2.3.1. Uses a logical approach for decision making

2.3.2. Demonstrates that various options have been considered for any given clinical problem

2.3.3. Recognises the pros and cons of various options

### **2.4      Problem solving (c.f. CS4)**

**Behavioural descriptors:**

- 2.4.1. Recognises limitations and seeks approval whenever necessary
- 2.4.2. Ensures resolution of problems, either by direct action or ensuring that the appropriate person is alerted to the problem
- 2.4.3. As a minimum, ensures that no harm comes to the patient

**Cluster 3 Collaborating with healthcare professionals**

**3.1 Practices in a professional manner (c.f. CS4)**

**3.2 Manages self (c.f. CS4)**

**3.3 Communicates effectively (c.f. CS4)**

**3.4 Teamwork (c.f. CS4)**

**3.5 Relationship with other healthcare professionals**

**Behavioural descriptors:**

- 3.5.1. Can outline the role of other healthcare professionals
- 3.5.2. Establishes a rapport with other healthcare professionals
- 3.5.3. Respects the contribution of all members of the healthcare team and support staff
- 3.5.4. Communicates recommendations or relevant information to healthcare professionals in a manner appropriate to their training, skills and needs
- 3.5.5. Communicates appropriately via discussion fora on-line
- 3.5.6. Responds to the educational needs of healthcare professionals, if requested

**3.6 Responds to queries (c.f. CS6)**

**Behavioural descriptors:**

- 3.6.1. Communicates information in a timely manner
- 3.6.2. Prioritises queries required for patient care
- 3.6.3. Recognises the optimal times to communicate with other healthcare professionals, with cognisance of their work schedule and patient commitments

**3.7 Advises about the use of medicines (c.f. CS6)**

**3.8 Documents clinical interventions**

**Behavioural descriptors:**

- 3.8.1. Records relevant clinical information *via* paper or electronic format in accordance with defined procedures and Data Protection Law
- 3.8.2. Clearly documents drug therapy reconciliation and other patient-related interventions in accordance with defined procedures
- 3.8.3. Effectively communicates clinical interventions, including supporting subjective and objective data, in accordance with defined procedures
- 3.8.4. Maintains privacy and security of patient medical records and information





***RCSI Pharmacy Internship Competence Standard 3a (2009-2010)***

**Community practice competencies**

**CS3a Clusters**

- 1 Displays good clinical skills**
- 2 Ensures the supply of non-prescription medicines or therapies**
- 3 Ensures the rational use of complementary and alternative medicines**
- 4 Advises on use of Medical devices and *In-Vitro*-diagnostic devices**
- 5 Advises on non-medicine measures to treat current health conditions**
- 6 Applies first aid**
- 7 Promotes good health**

## **Cluster 1      Displays good clinical skills**

### **1.1      Elicits a relevant patient history information**

#### **Behavioural descriptors:**

- 1.1.1 Establishes who the patient is
- 1.1.2 Determines how long the patient has the presenting symptoms
- 1.1.3 Establishes the frequency of condition
- 1.1.4 Determines what action the patient has already taken, if any
- 1.1.5 Determines any other patient factors that need to be considered (e.g. pregnancy, breastfeeding)
- 1.1.6 Elicits any drug-induced problems and confirms past medical history
- 1.1.7 Establishes any other pertinent considerations (e.g. contact lens wearer)

### **1.2      Refers patient and complies with professional, legal and ethical requirements**

#### **Behavioural descriptors:**

- 1.2.1. Advises the patient on an appropriate time interval that they should see an improvement in their presenting symptoms
- 1.2.2. Explains to patient the need if necessary to see another health professional
- 1.2.3. Refers patients to prescriber if patients' medicines fails in its purpose or causes an untoward effect
- 1.2.4. Assists with accessing medical practice or medical practitioner in exercise of professional judgment consistent with that outlined in S.64 (3) of the *Pharmacy Act 2007*, as amended

## **Cluster 2      Ensures the supply of non-prescription medicines**

### **2.2      Selects non-prescription medicine to meet patient's acute needs**

#### **Behavioural descriptors:**

- 2.1.1. Ensures the intended indication is consistent with its authorized licensed use (Summary of Product Characteristics (SPC))
- 2.1.2. Ensures that medicine is safe for patient e.g. considers interactions, contraindications and patient factors (e.g. breastfeeding)
- 2.1.3. Ensures the selection of appropriate dose forms e.g. suppository for vomiting child

### **2.2      Counsels patients about the use of non-prescription medicines**

#### **Behavioural descriptors:**

- 2.2.1 Informs patients on correct and safe use, side effects, storage, precautions and contra-indications

### **2.3      Complies with legal requirements and professional and ethical conventions regarding the supply of non-prescription medicines**

#### **Behavioural descriptors:**

- 2.3.1. Conducts supply of non-prescription medicine as per the *PSI-Pharmacy Practice Manual, a Self-audit tool for pharmacists and pharmacy owners*
- 2.3.2. Ensures sales of pharmacy supervised medicines (PS) is conducted as per legal requirements and workplace protocols
- 2.3.3. Recognises all non-prescription medicines that are classified as pharmacy supervised medicines (PS)
- 2.3.4. Recognises all non-prescription medicine that is on the general sales list (GSL)
- 2.3.5. Recognises all non-prescription medicine that is a controlled drug (e.g. codeine, CD5)
- 2.3.6. Identifies requests that indicate potential for misuse (e.g. diphenhydramine, caffeine)
- 2.3.7. Supplies non-prescription paracetamol supply in accordance with the paracetamol regulation as per the *Medicinal Products (Prescription and Control of Supply) Regulations, 2003-2008*

## **Cluster 3 Ensures the rational use of complementary and alternative medicines**

### **3.1 Selects a remedy to meet patient's needs**

#### **Behavioural descriptors:**

- 3.1.1. Ensures that the intended indications of the remedy is supported by an evidence base (e.g. if supplying garlic for hypercholesterolemia ensure that the remedy is standardised for most relevant active ingredient (*S*-Allylcysteine [SAC] and not allicin)
- 3.1.2. Ensures, in so far as possible, that the remedy is safe for patient e.g. considers interactions and contraindications with prescription and non-prescription allopathic medicine
- 3.1.3. Differentiate between anthroposophical, herbal and homeopathic medicines (e.g. therapeutic difference between an herbal topical preparation of arnica and a homeopathic topical preparation)

### **3.2 Counsels patients about the use of complementary and alternative medicines**

#### **Behavioural descriptors:**

- 3.2.1. Informs patients on correct and safe use including side effects, safe doses, storage, precautions and contraindications (e.g. 1g Maximum Daily Dose of Vitamin C)

### **3.3 Complies with legal requirements and professional and ethical conventions regarding the supply of non-prescription medicines**

#### **Behavioural descriptors:**

- 3.3.1. Conducts supply of complementary medicine in accordance with *the Medicinal Products (Control of Placing on the Market) Regulations, 2007*
- 3.3.2. Respects the right of the patient to select and self-treat with complementary and alternative medicines
- 3.3.3. Respects the right of patient to a honest appraisal by the intern of the possible usefulness or not of a selected remedy

## **Cluster 4 Advises on use of medical devices and *In-Vitro*-diagnostic devices**

### **4.1 Explains the use and purpose of general medical devices (GMD)**

#### **Behavioural descriptors:**

- 4.1.1. Ensures with the manufacturer/supplier that the device is CE marked and complies with relevant legislation (*European Communities (Medical Devices) Regulations, 1994*) prior to purchase
- 4.1.2. Ensures that the manufacturer's instructions for use (IFU) are followed and that the device is only used for the purpose intended by the manufacturer
- 4.1.3. Explains use, function and limitations of general medical devices (e.g. blood pressure monitor, pulse oximeter, thermometer)

### **4.2 Explains the use and purpose of *In Vitro*-diagnostic-medical-devices (IVD) employed for Point Of Care Testing (POCT)**

#### **Behavioural descriptors:**

- 4.2.1. Ensures with the manufacturer/supplier that the device is CE marked and complies with relevant legislation (*European Communities (In-vitro Diagnostic Medical Devices) Regulations, 2001*) prior to purchase
- 4.2.2. Ensures that the manufacturer's instructions for use (IFU) are followed and that the device is only used for the purpose intended by the manufacturer
- 4.2.3. Explains the use and function of IVDs (e.g. blood glucose device [includes self-testing device], urinalysis [with or without reader], pregnancy, ovulation tests, faecal occult blood tests)
- 4.2.3. Co-operates with corrective action conducted by the manufacturer or IMB (e.g. recall of affected batch of test strips)

### **4.3 Obtaining consent**

#### **Behavioural descriptors:**

- 4.3.1. Provides the patient with full details including the risks and benefits of the proposed test
- 4.3.2. Allows sufficient time to discuss the risk and benefits of the proposed test with the patient
- 4.3.3. Obtains and documents consent following the ethical and legal requirements
- 4.3.4. Respects and supports patient who refuse or withdraw consent

### **4.4 Performance of POCT**

#### **Behavioural descriptors:**

- 4.4.1. Complies with the current *Guidelines for the Safe Use and Management of Point of Care Testing in Primary, Community and Continuing Care (PCCC)* [approved by HSE, RCPI, PSI, HIQA & IMB]
- 4.4.2. Follows and develops SOPs
- 4.4.3. Complies with all quality assurance procedures (e.g. calibrates IVDs at indicated intervals, ensures privacy of patient)
- 4.4.4. Interprets results and make appropriate recommendations
- 4.4.5. Records results *via* paper or electronic format in accordance with defined procedures and Data Protection Law
- 4.4.6. Safely disposes of biological waste and/or sharps in accordance with the appropriate health and safety legislation and/or infection control legislation
- 4.3.7. Reports Adverse Incidents to IMB and appropriate professional body (ies)

### **4.5 Managing value-added services**

#### **Behavioural descriptors:**

- 4.5.1. Demonstrates a commitment to quality
- 4.5.2. Looks to improve the quality of the service offered
- 4.5.3. Recognises key drivers for national and local service improvement

## **Cluster 5 Advises on non-medicine measures to treat current health conditions**

### **5.1 Counsels patients about self-help measures to reduce current symptoms or discomfort**

#### **Behavioural descriptors:**

- 5.1.1. Provides advice on non-medicine measures to alleviate symptoms (e.g. calf stretching exercise for night cramps)

### **5.2 Informs and advises about patient advocate agencies in primary, community and continuing care (PCCC)**

#### **Behavioural descriptors:**

- 5.2.1. Advises patients about available resources and where and how to access them (e.g. *The Asthma Society of Ireland, Brainwave, HSE Needle Exchange Programme*)

## **Cluster 6 Applies First Aid**

### **6.1 Applies emergency first aid measures**

#### **Behavioural descriptors:**

- 6.1.1. Holds a current First Aid Certificate

### **6.2 Refers first aid emergencies to other health professionals**

#### **Behavioural descriptors:**

- 6.2.1. Explains referral procedures for specified first aid emergencies e.g. cardiac arrest
- 6.2.2. Identifies symptoms of, & potential for, poisoning from medicine overdoses
- 6.2.3. Refers and reports where appropriate to the Poisons Information Centre for Ireland ([www.poisons.ie](http://www.poisons.ie))

### **6.3 Provides treatment for minor injuries**

#### **Behavioural descriptors:**

- 6.3.1. Provides treatment, where appropriate to minor injuries including minor sprains, strains, cuts & grazes, burns and allergic reactions
- 6.3.2. Knows what not to treat and who not to treat e.g. babies < 1 year
- 6.3.3. Uses standard precautions when dealing with blood/body fluids (e.g. wears gloves for handling blood/body fluids; washes hands frequently to limit spread of bacterial or viral infections etc.)

### **6.4 Advises on the use of wound dressings**

#### **Behavioural descriptors:**

- 6.4.1. Explains purpose and use of different dressings/bandages
- 6.4.2. Advises and counsels patients about correct use of bandages/dressings

## **Cluster 7 Promotes good health**

### **7.1 Counsels patients about lifestyle changes, which may reduce illness**

#### **Behavioural descriptors:**

- 7.1.1. Advises appropriately on health promotion linked to the sale and supply of medicines and/or presenting symptoms
- 7.1.2. Displays the communication skills of making an effective brief intervention
- 7.1.3. Promotes the appropriate use of self care cards and self care information technology
- 7.1.4. Advises clearly in response to requests for advice about symptoms where dietary factors are relevant (e.g. constipation, indigestion)
- 7.1.5. Advises clearly on smoking cessation
- 7.1.6. Advises clearly and confidentially on request about contraception, safe sex, conception, pregnancy, breast feeding and health of under- 5's

### **7.2 Informs and advises patients about preventing the spread of disease**

#### **Behavioural descriptors:**

- 7.2.1. Advises clearly about the spread of disease e.g. head-lice, measles, safe sexual practices related to STIs
- 7.2.2. Advises clearly on requests about immunization

### **7.3 Informs and advises patient about screening programmes and community programmes relating to health care and medicines**

#### **Behavioural descriptors:**

- 7.3.1. Participates in campaigns for the disposal of unwanted medicines (e.g. DUMP campaign)
- 7.3.2. Participates in local and HSE health promotion events



***RCSI Internship Competence Standard 3b (2009-2010)***  
**Hospital Pharmacy Competencies**

**CS3b Clusters**

- 1 Practise medicines management**
- 2 Medicines procurement**
- 3 Dispensing and supply of medicines**
- 4 Practices clinical pharmacy**
- 5 Aseptic compounding services**
- 6 Extemporaneous compounding**
- 7 Clinical trials**

## **Cluster 1 Practise medicines management**

### **1.1 Defines medicines management and its application in hospital pharmacy**

#### **Behavioural descriptors:**

- 1.1.1. Understands the role of hospital pharmacist in dispensing, aseptic compounding, out-patient department, satellite pharmacies, medicines information, clinical activities and other hospital pharmacy activities
- 1.1.2. Identifies the medicines use process as it applies in hospital
- 1.1.3. Understands the medicines reconciliation process at points of transfer
- 1.1.4. Explains the role of the admission pharmacist
- 1.1.5. Describes the discharge planning process
- 1.1.6. Describes the differences between acute hospitals and non-acute hospitals
- 1.1.7. Explains how Drugs and Therapeutic Committees work
- 1.1.8. Understands the importance of the formulary and/or prescribing guidelines within the hospital

### **1.2. Applies medicines management**

#### **Behavioural descriptors:**

- 1.2.1. Uses medicines management principles in drug procurement
- 1.2.2. Uses medicines management principles in drug distribution
- 1.2.3. Uses medicines management principles in dispensing processes
- 1.2.4. Uses medicines management principles in aseptic compounding
- 1.2.5. Uses medicines management principles in ward pharmacy
- 1.2.6. Uses medicines management principles in admission process
- 1.2.7. Uses medicines management principles in discharge process
- 1.2.8. Uses risk minimisation techniques to ensure safety in the medicines use process

## **Cluster 2 Medicines procurement**

### **2.1 Organisational structure of pharmacy and dispensary**

#### **Behavioural descriptors:**

- 2.1.1. Describes the pharmacy and pharmacy dispensary structure
- 2.1.2. Appreciates staff roles within the dispensary and hospital pharmacy
- 2.1.3. Explains how risk minimisation applies in the dispensary
- 2.1.4. Describes the role of directorates (or equivalent structure) within the hospital
- 2.1.5. Demonstrates knowledge of dispensary equipment and relevant quality assurance systems e.g. for computers, fridges, balances, extemporaneous preparation equipment etc.
- 2.1.6. Describes the documentation and recording systems used in hospital dispensary e.g. order book wants list, to follows, non-formulary requisitions, MDA requisitions etc.

### **2.2 Understands financial structures within the hospital**

#### **Behavioural descriptors:**

- 2.2.1. Displays knowledge of hospital budgets and budget allocation from HSE
- 2.2.2. Retrieves information pertinent to HIPE
- 2.2.3. Comprehends high expenditure areas within hospitals
- 2.2.4. Appreciates economic assessment for planning and forecasting budgets
- 2.2.5. Grasps the cost-effectiveness measures used to contain budgets including clinical pharmacy activities, pharmacoeconomic assessment, prescribing guideline application and stock control measures
- 2.2.6. Describes how secondary prescribing influences primary care prescribing
- 2.2.7. Understands financial systems operating in hospital pharmacy
- 2.2.8. Displays knowledge of systems and protocols

### **2.3 Participates in the procurement process**

#### **Behavioural descriptors:**

- 2.3.1. Participates in the purchasing process with relevant personnel
- 2.3.2. Follows relevant SOPs relating to procurement
- 2.3.3. Understands the tendering process and contract management
- 2.3.4. Identifies the role of risk assessment in purchasing
- 2.3.5. Appreciates the need for and application of value for money purchasing
- 2.3.6. Places an order either verbally or through tele-ordering to main pharmaceutical wholesalers
- 2.3.7. Describes the source of unlicensed medications and unusual medicines
- 2.3.8. Describes the need for appropriate stock control and maintenance of minimum stock
- 2.3.9. Communicates with pharmaceutical representatives
- 2.3.10. Prioritises tasks relating to orders

## **2.4 Goods inwards process**

### **Behavioural descriptors:**

- 2.4.1. Checks orders received
- 2.4.2. Maintains the 'to-follows' list
- 2.4.3. Liaises with hospital pharmacy finance staff
- 2.4.4. Stores goods received appropriately including fridge items
- 2.4.5. Maintains records of MDA's and checks balance
- 2.5.6. Understands the need for timely receipt of orders from wholesalers
- 2.5.7. Ensures cold chain has been maintained during delivery
- 2.5.8. Sorts returns items for wholesalers
- 2.5.9. Follows up on orders not received
- 2.5.10. Displays efficiency in the ordering process
- 2.5.11. Applies quality performance indicators to ordering process
- 2.5.12. Prioritises tasks

## **Cluster 3 Dispensing and supply**

### **3.1 Dispenses medicines**

#### **Behavioural descriptors:**

- 3.1.1. Dispenses items in response to orders received from stock sheets, clinical pharmacists, ward requisitions, MDA requests, satellite pharmacies, OPD, specialist day care clinics etc.
- 3.1.2. Checks appropriateness of orders with relevant personnel when and if necessary e.g. ward pharmacists, NCHDs, nursing staff, Consultants, laboratory etc.
- 3.1.3. Follows dispensary procedures (SOPs) for selected items e.g. blood derived products, unlicensed medicines etc.
- 3.1.4. Ensures dispensary procedures are safe
- 3.1.5. Labels and packages orders correctly for identification purpose
- 3.1.6. Uses special labels correctly including 'Store in fridge', 'hazardous cytotoxics' etc.
- 3.1.7. Ensures packaging is appropriate preparation e.g. injectable; fridge item etc.
- 3.1.8. Handles cytotoxic and hazardous medicines appropriately
- 3.1.9. Implements error containment systems to dispensing process
- 3.1.10. Follows appropriate checking procedures
- 3.1.11. Maintains relevant records and documentation
- 3.1.12. Generates dispensed lists and other reports from computer when required
- 3.1.13. Uses automated dispensing systems and other robotic systems where applicable
- 3.1.14. Prepares unit doses for inpatients
- 3.1.15. Uses bar-coding systems (where applicable)
- 3.1.16. Adds to 'wants list' when required
- 3.1.17. Follows-up on items ordered from wholesalers to fulfil orders
- 3.1.18. Informs relevant staff if orders are to be delayed
- 3.1.19. Follows up on urgent orders from wards/outpatients/clinics
- 3.1.20. Works efficiently
- 3.1.21. Prioritises tasks
- 3.1.22. Communicates clearly and effectively on telephone, in person or in writing with other staff in the dispensary and the hospital



### **3.2 Supplies medicines**

#### **Behavioural descriptors:**

- 3.2.1. Liaises with portering services to distribute medicines
- 3.2.2. Operates other delivery systems
- 3.2.3. Deals with queries from wards and other locations
- 3.2.4. Prepares weekend supplies
- 3.2.5. Participates in an on-call rotation
- 3.2.6. Ensures cold chain is preserved during distribution process
- 3.2.7. Responds to *ad hoc* callers to dispensary
- 3.2.8. Handles problems that arise efficiently
- 3.2.9. Liaises with aseptic unit (where applicable)
- 3.2.10. Minimises errors in supply process
- 3.2.11. Sorts returned medication according to pharmacy procedures
- 3.2.12. Dispenses investigational drugs involved in clinical trials according to set procedures
- 3.2.13. Displays effective communication skills with relevant staff

## **Cluster 4 Practices clinical pharmacy**

**Note: The key clusters of Competency Standards 3 apply in full to hospital pharmacy practice.**

### **4.1 Demonstrates clinical knowledge**

#### **Behavioural descriptors:**

- 4.1.1. Displays knowledge of pathophysiology of diseases/conditions
- 4.1.2. Understands and explains how drugs work
- 4.1.3. Identifies major adverse reactions of drugs
- 4.1.4. Explains mechanisms of drug interactions

### **4.2 Demonstrates knowledge of clinical pharmacy procedures**

#### **Behavioural descriptors:**

- 4.2.1. Describes clinical pharmacy systems operating within hospital
- 4.2.2. Understands key areas of clinical pharmacy involvement e.g. ward round participation, medication order review process, contributions to clinical care (advice), medical notes review, laboratory data retrieval, patient education, medicines information provision etc.
- 4.2.3. Retrieves evidence supporting effectiveness of clinical pharmacy activities in the hospital

### **4.3 Practices clinical pharmacy**

#### **Behavioural descriptors:**

- 4.3.1. Participates in clinical pharmacy activities e.g. ward rounds, medication orders review (the drug Kardex), medicines reconciliation, patient education, medicines information provision etc.
- 4.3.2. Undertakes medication usage review
- 4.3.3. Describes the clinical pharmacist's documentation and records
- 4.3.4. Maintains the clinical pharmacist's records
- 4.3.5. Analyses the clinical pharmacist's records
- 4.3.6. Attends relevant educational *fora* within the hospital
- 4.3.7. Displays effective communication skills with patients, colleagues, doctors, nursing staff

### **4.4 Applies clinical pharmacy skills to individual prescriptions**

#### **Behavioural descriptors:**

- 4.3.1. Identifies need for the drug
- 4.3.2. Selects appropriate medicines
- 4.3.3. Provides advice on administration of drug
- 4.3.4. Provides the drug product
- 4.3.5. Monitors drug treatment

- 4.3.6. Provides accurate, relevant and timely medicines information
- 4.3.7. Follows up on clinical activities and records outcomes of activities
- 4.3.8. Prioritises activities and undertakes appropriate action

## **Cluster 5     Aseptic compounding services**

### **5.1     Explains compounding principles and procedures**

#### **Behavioural descriptors:**

- 5.1.1. Explains use of aseptic techniques & equipment,
- 5.1.2. Describes the principles underlying the design and layout of compounding units
- 5.1.3. Explains the principles of sterile compounding, e.g. no-touch technique, use of laminar-flow cabinets
- 5.1.4. Describes the principles of aseptic technique for different products e.g. infusions, pushes etc.
- 5.1.5. Demonstrates knowledge of Good Manufacturing Practise and quality assurance protocols
- 5.1.6. Demonstrates knowledge of in-house aseptic standard operating procedures and protocols e.g. dealing with hazardous spillages, protocol for staff exposure incidents, safe disposal of hazardous waste, safe handling procedures
- 5.1.7. Explains the need for risk assessment in the aseptic compounding setting
- 5.1.8. Understands the use of and compounding of investigational drugs involved in clinical trials and develops protocols as necessary

### **5.2     Explains principles of stabilities and incompatibilities for compounded formulations**

#### **Behavioural descriptors:**

- 5.2.1. Uses appropriate reference sources for information on stabilities e.g. Trissel Handbook of Injectable Drugs
- 5.2.2. Recognises the differences between chemical and physical incompatibilities
- 5.2.3. Identifies key products compounded in the Aseptic services unit to minimise antimicrobial contamination e.g. CIVAs, cytotoxic products, antiviral agents, TPN, epidurals, biological agents, gene therapy etc.

### **5.3     Produces worksheets and calculations and labels**

#### **Behavioural descriptors:**

- 5.3.1. Checks orders for accuracy
- 5.3.2. Liaises with relevant clinical pharmacist to verify orders for aseptic preparations
- 5.3.3. Calculates quantities of ingredients & end product to 100% accuracy, and documents this
- 5.3.4. Produces clear labels for end products, including full patient instructions, expiry dates, storage information and any supplementary advisory labels

### **5.4     Assembles required ingredients and records batch nos.**

#### **Behavioural descriptors:**

- 5.4.1. Obtains correct form & strength of ingredients needed for product
- 5.4.2. Checks each ingredient to ensure it is fit to use, e.g. checks expiry date, signs of degradation, stored correctly (temperature & protection from light & moisture), stability if packaging already opened.
- 5.4.3. Ensures personnel are appropriately prepared for aseptic production, e.g. hand washing, appropriate clothing etc.

### **5.5     Uses standard technique for aseptic compounding of required product**

#### **Behavioural descriptors:**

- 5.5.1. Complies with relevant SOP for compounding of product
- 5.5.2. Complies with Good Manufacturing Practice Guidelines
- 5.5.3. Uses aseptic, no-touch technique for sterile preparations hospital
- 5.5.4. Uses correct checking procedures with other staff

## **5.6 Packs, labels and stores compounded products to optimise safety**

### **Behavioural descriptors:**

- 5.6.1. Packs each compounded product in container suitable for type, quantity, intended use & storage requirements of product, e.g. protected from light
- 5.6.2. Attaches labels securely, without obscuring relevant information
- 5.6.3. Complies with optimal storage conditions regarding: temperature, light, moisture, type of container, transport of product
- 5.6.4. Ensures aseptic preparation areas are monitored, serviced and cleaned regularly

## **5.7 Completes documentation and records**

### **Behavioural descriptors:**

- 5.7.1. Completes batch sheets, worksheets & records accurately & legibly
- 5.7.2. Completes & verifies worksheets & batch sheets & files documentation according to current legislation, codes, standards & work place practices
- 5.7.3. Ensures an authorised person verifies all work.

## **Cluster 6 Extemporaneous compounding**

### **6.1 Prepares extemporaneous formulations**

#### **Behavioural descriptors:**

- 6.1.1 Retrieves the appropriate worksheets and SOPs for formulation (from computer or files)
- 6.1.2 Assembles required constituents from location in pharmacy department or extemp room
- 6.1.3 Assembles required equipment ensuring it is clean and fit for use
- 6.1.4 Checks calibration of necessary equipment is up-to-date e.g. balances
- 6.1.5 Completes worksheets with constituent details, batch nos., expiry dates etc.
- 6.1.6 Performs correct calculations when necessary
- 6.1.7 Performs extemporaneous dispensing in a timely and accurate fashion according to SOP
- 6.1.8 Follows required checking procedures (as per SOP)

### **6.2 Presents the medicine**

#### **Behavioural descriptors:**

- 6.2.1. Presents the medicine in such a way as to prevent accidents and protect end-users (AHPs or patients) e.g. appropriate ribbed bottles for P formulations etc.
- 6.2.2. Presents the medicine in such a way as to preserve the medicine from deterioration

### **6.3 Labels the medicine**

#### **Behavioural descriptors:**

- 6.3.1. Prepares appropriate batch labels (either standard or one-off where appropriate) from computer
- 6.3.2. Verifies cautionary labels on medicines e.g. 'Not to be Taken', 'Store in the Fridge' etc.
- 6.3.3. Verifies that labels for extemporaneous medicines contain date of manufacture, appropriate expiry date and batch number
- 6.3.4. Ensures that directions for use are clear and precise in order to ensure compliance
- 6.3.5. Ensures that affixed labels are securely applied (e.g. using large size tape)

## **Cluster 7 Clinical trials**

### **7.1 Explains principles of clinical trial conduct**

#### **Behavioural descriptors:**

- 7.1.1 Understands the regulations underpinning the conduct of clinical trials e.g. Medicines for Human Use (Clinical Trials Regulations 2004); ICH (International Conference on Harmonisation) / GCP (Good Clinical Practice) guidelines – CPMP/ICH/135/95 just after the reference to the 2004 legislation
- 7.1.2 Can explain the design and methodology of a randomised, controlled clinical trial e.g. single, double or triple blinded randomisation

- 7.1.3 Explains the role of the Ethics Committee within the organisation and the principles whereby approval for clinical trials is given
- 7.1.4 Understands Pharmacovigilance issues as they pertain to clinical trials i.e. identification of serious adverse events, determining causal link to trial medicine (or comparator medicine)

## **7.2 Explains how investigational medical products are handled in the pharmacy**

### **Behavioural descriptors:**

- 7.2.1 Understands how investigational products used in clinical trials are stored in the pharmacy including safe handling, protected areas, returned medicines etc.
- 7.2.2 Defines the role and duties of the designated pharmacy staff member involved in specified clinical trials e.g. documentation, records, SOPs etc.
- 7.2.3 Explains the requirements for training logs and signature identification in the context of clinical trials involving the pharmacy department
- 7.2.4 Appreciates the need for confidentiality and security pertaining to all aspects of clinical trial conduct
- 7.2.5 Understands the need for access to trial investigators for randomisation codes for newly recruited patients
- 7.2.6 Understands the need for access to code breaks on a 24h basis to ensure patient safety

## **7.2 Dispenses clinical trial medicines**

### **Behavioural descriptors:**

- 7.2.1 Under the supervision of the designated pharmacist, undergoes training required to dispense clinical trial medicines
- 7.2.2 If possible, participates in the process of obtaining informed consent from a patient for trial participation
- 7.2.3 Dispenses clinical trial medicines according to written procedures and trial protocols
- 7.2.4 Records required documentation pertaining to dispensing of clinical trial medicines



*RCSI Internship Competence Standard 4 (2009-2010)*

**Professional practice competencies**

**CS4 Clusters**

- 1 Practises in a professional manner**
- 2 Complies with the law**
- 3 Practises in an ethical manner**
- 4 Maintains fitness to work**

## **Cluster 1 Works in a professional manner**

### **1.1 Works in a professional manner**

#### **Behavioural descriptors:**

- 1.1.1. Maintains professional behaviour at all times e.g. appearance, hygiene, punctuality
- 1.1.2. Retains composure in stressful situations
- 1.1.3. Shows ability to make decisions when required
- 1.1.4. Demonstrates ability to work under supervision of tutor
- 1.1.5. Demonstrates ability to work as part of a team and has a positive attitude to working with colleagues
- 1.1.6. Takes responsibility for patient care

### **1.2 Shows engagement and willingness to work**

#### **Behavioural descriptors:**

- 1.2.1. Approaches work with enthusiasm
- 1.2.2. Displays a consistent standard of work
- 1.2.3. Takes initiative, asks for feedback and strives to continually improve
- 1.2.4. Inspires confidence as a professional

### **1.3 Works responsibly**

#### **Behavioural descriptors:**

- 1.3.1. Takes responsibility for own action
- 1.3.2. Appreciates effects of his/her work on tutor, work team and patients
- 1.3.3. Strives for a high quality of work performance
- 1.3.4. Recognises limitations

### **1.4 Works in an exact manner**

#### **Behavioural descriptors:**

- 1.4.1. Demonstrates an appreciation of the principles of risk management and error containment
- 1.4.2. Limits mistakes in everyday practice
- 1.4.3. Accepts correction, implements change and learns from the mistake
- 1.4.4. Works in a planned and organised manner
- 1.4.5. Aims for accurate and high quality documentation

### **1.5 Confidentiality**

#### **Behavioural descriptors:**

- 1.5.1. Always maintains patient confidentiality
- 1.5.2. Handles data and records in compliance *Data Protection Acts*

## **Cluster 2 Complies with the law**

### **2.1 Explains the law relevant to work**

#### **Behavioural descriptors:**

- 2.1.1. Demonstrates an understanding of the principles of general law
- 2.1.2. Demonstrates an understanding of the principles of pharmacy law
- 2.1.3. Displays a working knowledge of pharmacy legislation

### **2.2. Complies with the law relevant to work**

#### **Behavioural descriptors:**

- 2.2.1. Applies the principles of general law
- 2.2.2. Applies the principles of pharmacy law
- 2.2.3. Practices in a manner consistent with the *Pharmacy Act 2007*, as amended
- 2.2.4. Complies with regulations governing the sale and supply medical devices, poisons, human medicines and veterinary medicines

## **Cluster 3      Practises in an ethical manner**

### **3.1.      Complies with *RCSI Code of Conduct for Pharmacy Interns***

#### **Behavioural descriptors:**

- 3.1.1. Demonstrates an understanding of the ethical principles of healthcare (beneficence, non-maleficence, autonomy, confidentiality, fidelity, informed consent, respect for persons & justice)
- 3.1.2. Justifies the decisions they make on the basis these ethical principles
- 3.1.3. Displays a working knowledge of *RCSI Code of Conduct for Pharmacy Interns & PSI Code of Conduct*
- 3.1.4. Practises in a manner consistent with the *RSCI Code of Conduct for Pharmacy Interns 2009-2010* and *PSI Code of Conduct*, and any relevant workplace code of practice/conduct/ethics

### **3.2.      Being socially and culturally respectful and knowledgeable**

#### **Behavioural descriptors:**

- 3.2.1. Considers the impact of socioeconomic factors on patients and carers
- 3.2.2. Analyses personal biases and reactions to people from different cultural, ethnic and socioeconomic backgrounds
- 3.2.3. Checks and discusses with tutor for organizational assumptions and biases that impact on patient care

### **3.3.      Obtaining consent**

#### **Behavioural descriptors:**

- 3.3.1. Shows respect for a patient's right to make decisions
- 3.3.2. Avoids using coercion with patients
- 3.3.3. Obtains and documents consent following the ethical and legal requirements
- 3.3.4. Respects patients who make competent refusals of treatment/tests
- 3.3.5. Supports patients who withdraw consent
- 3.3.6. Records a patient's refusal
- 3.3.7. Refer patient to supervising pharmacist/tutor for consent when appropriate

## **Cluster 4      Maintains fitness to work**

### **4.1      Maintains professional standards of practice at work**

#### **Behavioural descriptors:**

- 4.1.1. Assesses performance against the *RCSI Intern Competency Standards 2009-2010*
- 4.1.2. Reflects on performance
- 4.1.3. Identifies CPD learning needs
- 4.1.4. Evaluates learning
- 4.1.5. Maintains an electronic CPD record

### **4.2      Undertakes professional development**

#### **Behavioural descriptors:**

- 4.2.1. Discusses professional & practice issues with tutor and colleagues
- 4.2.2. Demonstrates ability to keep up to date through appropriate sources of evidence e.g. on-line updates from reputable sources of evidence e.g. *National Electronic Library of Medicine, UKMI etc.*
- 4.2.3. Completes professional development, as necessary, to achieve identified learning goals
- 4.2.4. Develops a positive and proactive disposition to lifelong learning in pharmacy practice



***RCSI Internship Competence Standard 5 (2009-2010)***

**Patient safety & risk management competencies**

**CS5 Clusters**

- 1 Involves patients and carers as partners in healthcare.**
- 2 Communicating risk**
- 3 Communicating honestly with patients after an adverse event (open disclosure)**
- 4 Recognising, reporting and managing adverse events and near misses**
- 5 Being a team player and showing leadership**
- 6 Managing risk**
- 7 Managing complaints**
- 8 Managing fatigue and stress**



## **Cluster 1 Involves patients and carers as partners in healthcare**

### **1.1 Communication skills**

#### **Behavioural descriptors:**

- 1.1.1. Actively explains to patients and carers their role in care, decision-making and preventing adverse events
- 1.1.2. Involves patients or their carers at every level of decision making
- 1.1.3. Provides information appropriately and completely
- 1.1.4. Recommends patient self-management programmes
- 1.1.5. Utilises conflict resolution skills
- 1.1.6. Provides an appropriate environment for the patient encounter
- 1.1.7. Ends the patient encounter appropriately
- 1.1.8. Develops and gives information
- 1.1.9. Involves patients or carers in decisions about their health care, such as handover and discharge processes

### **1.2 Sensitivity to uncertainty, anxiety, embarrassment, or loss of dignity that patients or carers may experience**

#### **Behavioural descriptors:**

- 1.2.1. Involves carers who accompany patient appropriately
- 1.2.2. Is sensitive to a patient's views
- 1.2.3. Is sensitive to the uncertainty and anxiety that patients' carers may experience
- 1.2.4. Informs patients about how information is shared within teams and between those who will be providing their care
- 1.2.5. Respects patient confidentiality

## **Cluster 2 Communicating risk**

### **2.1. Communication skills about risk**

#### **Behavioural descriptors:**

- 2.1.1. Helps patients to become involved in planning and implementing their chosen treatment option
- 2.1.2. Reduces misunderstanding by using standardised 'vocabulary to describe the probability of a risk occurring
- 2.1.3. Avoids using only descriptive terms (e.g. low risk) that the patient may not understand
- 2.1.4. Avoids information overload
- 2.1.5. Allows sufficient time to ensure exchange of quality information
- 2.1.6. Ensures that the patient or carer understands what you have explained to them
- 2.1.7. Provides risk information to adolescents, third party decision makers and interpreters

## **Cluster 3 Communicating honestly with patients after an adverse event**

### **3.1 Communication to a patient after an adverse event or near miss**

#### **Behavioural descriptors:**

- 3.3.1. Notifies tutor of an adverse event or near miss
- 3.3.2. Completes appropriate documentation in patient medication records, incidents reports and records for investigation
- 3.3.3. Participates in an investigation of an adverse event or near miss
- 3.3.4. Shows understanding of patients suffering after adverse events or near misses
- 3.3.5. Makes referral of patients suffering an adverse event or near miss to tutor
- 3.3.6. Provides patients and carers with information about communicating honestly after an adverse event (open disclosure)
- 3.3.7. Complies with standards for open and honest communication with patients (*cf* Human Resources *Module 2*)

## **Cluster 4 Recognising, reporting and managing adverse events and near misses**

#### **4.1 Reports and learns from errors and systems failures**

##### **Behavioural descriptors:**

- 4.1.1. Identifies the most common errors in your workplace
- 4.1.2. Shares lessons from the analysis of system failures and patient safety incidents with tutor and relevant co-workers
- 4.1.3. Applies the privacy, confidentiality, legal and ethical issues for protecting access to patient-pharmacist communications
- 4.1.4. Promotes a blame free culture

#### **4.2 Uses IT hardware and software in the workplace**

##### **Behavioural descriptors:**

- 4.2.1. Uses electronic communication technology for the full range of electronic communication appropriate to the duties of a pharmacy intern
- 4.2.2. Uses electronic patient medication records
- 4.2.3. Applies relevant procedure (policies) and technical means (security) to ensure that confidential information is appropriately protected

### **Cluster 5 Being a team player and showing leadership**

#### **5.1 Uses teamwork principles in work practices**

##### **Behavioural descriptors:**

- 5.1.1. Identifies your own values and assumptions and how these affect interactions with other members of the healthcare team
- 5.1.2. Describes the roles of team members and how psychosocial factors affect their interactions
- 5.1.3. Recognises the impact of change on other team members
- 5.1.4. Includes the patient as a member of your team

#### **5.2 Co-ordinates and integrates care processes to ensure continuity and reliability of care**

##### **Behavioural descriptors:**

- 5.2.1. Filters and accurately records important information
- 5.2.2. Ensures accurate and timely information reaches those who need it at the appropriate times
- 5.2.3. Ensures that patients are appropriately cared for by the team even when the team members are in entirely different physical locations
- 5.2.4. Manages effective shift handovers

#### **5.3 Accepts responsibility for professional and personal actions when working as part of a team**

##### **Behavioural descriptors:**

- 5.3.1 Recognises and work within professional limits of an intern

## **Cluster 6     Managing risk**

### **6.1     Identifies and reports a potential risk in the workplace**

#### **Behavioural descriptors:**

- 6.1.1. Reports known hazards and risk in the workplace (*cf.* www.hsa.ie)
- 6.1.2. Reviews any risk strategies that have been implemented
- 6.1.3. Keeps accurate and complete records
- 6.1.4. Self assesses to reduce the risk of errors caused by inadequate knowledge and skills
- 6.1.5. Participates in meetings that discuss risk management and patient safety
- 6.1.6. Responds appropriately to patients and carers after adverse events

### **6.2     Understanding health care errors**

#### **Behavioural descriptors:**

- 6.2.1. Recognises the psychological precursors of error-attitude, inattention, distraction, preoccupation, forgetfulness, fatigue and stress

## **Cluster 7     Managing complaints**

### **7.1     Responds to complaints**

#### **Behavioural descriptors:**

- 7.1.1. Provides a written report in response to a complaint
- 7.1.2. Communicates honestly with patients, careers, co-workers and tutor when dealing with complaints
- 7.1.3. Keeps accurate and complete records
- 7.1.4. Maintains confidentiality at all times except when required by law to do otherwise

## **Cluster 8     Managing fatigue and stress**

### **8.1     Recognises and responds to the symptoms of fatigue and stress**

#### **Behavioural descriptors:**

- 8.1.1. Limits the amount of additional work done outside designated pharmacy
- 8.1.2. Rests before or take breaks during shifts
- 8.1.3. Consistently report incidents arising from hazards related to shift work and extended hours



***RCSI Internship Competence Standard 6 (2009-2010)***

**Health and Medicines Information competencies**

**CS6 Clusters**

- 1 Reference sources for information relating to health and medicine.**
- 2 Designs and executes search strategies for health and medicines information**
- 3 Evaluates information systematically**
- 4 Provides information**
- 5 Keeps up to date**
- 6 Manages information**

## Cluster 1 Reference sources for information relating to health and medicines

### 1.1 Describes, accesses and uses information sources

#### **Behavioural descriptors:**

##### **Bibliographic resources**

- 1.1.1. Describes common bibliographic references for health-related and medicines-related information e.g. BNF, BNF for Children, MIMS, Martindale, Stockley, Merck Manual Trissel, Brigg's etc.
- 1.1.2. Ensures place of work has up-to-date editions and/or on-line access to bibliographic references
- 1.1.3. Demonstrates working knowledge of the content of bibliographic texts and the information available to answer queries i.e. navigates texts

##### **Pre-digested resources**

- 1.1.4. Describes the information available in useful pre-digested sources e.g. NMIC Bulletins, Therapeutics Today, MeReC bulletins, PACE newsletters, DTB Bulletins etc.
- 1.1.5. Accesses pre-digested sources via appropriate web portals
- 1.1.6. Appreciates the usefulness of pre-digested information for informing practice and to assist query answering

##### **Irish medicines-related information sources**

- 1.1.7. Describes and accesses reference resources specific to medicines in Ireland e.g. Irish Medicines Board at [www.imb.ie](http://www.imb.ie), [www.medicines.ie](http://www.medicines.ie), National Poisons Information Centre at [www.poisons.ie](http://www.poisons.ie), Irish Drug Reference Directory
- 1.1.8. Uses Irish resources when required for specific queries e.g. licensed indications of medicines, unlicensed indications for licensed medications, availability of generic medicines etc.
- 1.1.9. Understands the role of the National Medicines Information Centre at [www.nmic.ie](http://www.nmic.ie) and refers queries when appropriate

##### **Best-practice guidelines**

- 1.1.10. Demonstrates knowledge of guidelines for best practice in the management of diseases and conditions e.g. Irish National Guidelines, UK NICE recommendations, SIGN guidelines etc.
- 1.1.11. Uses best practice guidelines when required to add to knowledge base or to answer enquiries

##### **Internet resources for pharmacists**

- 1.1.12. Describes useful internet resources for pharmacists pertaining to health and medicines information e.g. National Electronic Library of Medicines at [www.nelm.nhs.uk](http://www.nelm.nhs.uk), UKMI at [www.ukmi.nhs.uk](http://www.ukmi.nhs.uk), Clinical Knowledge Summaries at [www.cks.nhs.uk](http://www.cks.nhs.uk), National Library for Health at [www.nlh.nhs.org](http://www.nlh.nhs.org) etc.
- 1.1.13. Demonstrates a working knowledge of information available on internet resources described in 1.1.11 and when and how to use them to best assist increasing knowledge base and/or to answer queries

##### **Irish health-related resources**

- 1.1.14. Accesses reference resources specific to health, public health, health policy and healthcare delivery in Ireland e.g. Central Statistics Office at [www.cso.ie](http://www.cso.ie), National Cancer Registry of Ireland at [www.ncri.ie](http://www.ncri.ie), Health Protection Surveillance Centre at [www.hpsc.ie](http://www.hpsc.ie), Department of Health and Children at [www.dohc.ie](http://www.dohc.ie), Health Services Executive at [www.hse.ie](http://www.hse.ie), Health Information and Quality Authority at [www.hiqa.ie](http://www.hiqa.ie) etc.

##### **Journals**

- 1.1.15. Determines sources of information relating to pharmacy practice e.g. journals including IPJ, P, Hospital Pharmacist, Pharmacy World Science, International Journal of Evaluation in Practice, Australian Pharmacist, American Journal of Health System Pharmacy etc.
- 1.1.16. Knows how to use information sources when required

##### **Databases**

- 1.1.17. Demonstrates knowledge of advanced searching methods in databases e.g. PubMed, Medline or meta-search engines e.g. Tripdatabase at [www.tripdatabase.com](http://www.tripdatabase.com)

- 1.1.18. Understands and accesses sources of research syntheses derived from systematic reviews and meta-analyses e.g. the Cochrane Library at [www.cochranelibrary.com](http://www.cochranelibrary.com)

## **Cluster 2    Designs and executes search strategies for health and medicines information**

### **2.1    Applies a logical approach to query answering**

#### **Behavioural descriptors:**

- 2.1.1. Follows a logical approach to answering enquiries
- 2.1.2. Applies workplace SOPs to enquiry answering where appropriate
- 2.1.3. Responds to queries professionally and personably

### **2.2    Applies systematic searching skills to query answering**

#### **Behavioural descriptors:**

**Routine searches in bibliographic sources (Note: Most routine medicine or health-related queries can be effectively answered using the common texts available in pharmacies or hospitals. SPC data is available either through the IMB portal or [www.medicines.ie](http://www.medicines.ie) )**

- 2.2.1. Finds the required information efficiently, including information on: patient factors, interactions, precautions & contraindications, therapeutic efficacy, dosages, dose forms, methods of administration & side effects etc.
  - 2.2.2. Determines best resources to answer queries through intimate working knowledge of bibliographic texts including the BNF, BNF for Children, MIMS, Martindale, Stockely, Merck Manual etc.
  - 2.2.3. Demonstrates ability to combine information from different bibliographic sources to answer queries effectively
  - 2.2.4. Uses pre-digested sources and other useful sources of information to add to information when required
- Database searches (Note: from time to time systematic searches of the databases may be required especially in the context of complex queries, or for research purposes. Tutorials are available, cf Module 6)**
- 2.2.5. Demonstrates the ability to search medical and pharmaceutical databases efficiently when required e.g. *Medline, PubMed, IPA etc.*
  - 2.2.6. Records search results
  - 2.2.7. Summarises search results
  - 2.2.8. Refers to NMIC when appropriate

## **Cluster 3    Evaluates information systematically**

### **3.1    Assesses clinical research**

#### **Behavioural descriptors:**

- 3.1.1. Understands the design and methodology of clinical and healthcare-related research
- 3.1.2. Appreciates the strengths and limitations of the randomised controlled trial
- 3.1.3. Sources information on clinical trials e.g. [www.clinicaltrials.gov](http://www.clinicaltrials.gov)
- 3.1.4. Appreciates the role of epidemiological research in informing healthcare policy and practices
- 3.1.5. Understands the strengths and weaknesses of cohort, case-control and cross-sectional studies in epidemiology and pharmacoepidemiology
- 3.1.6. Demonstrates a knowledge of the place of qualitative research in the healthcare setting

### **3.2    Interpreting the literature**

#### **Behavioural descriptors:**

- 3.2.1. Differentiates between good quality and poor quality information derived from search strategies
- 3.2.2. Discerns differences between peer-reviewed publications and information derived from manufacturers

- 3.2.3. Evaluates the literature critically
- 3.2.4. Demonstrates the ability to interpret data results from clinical research i.e. AR, ARR, RR, RRR and NNT
- 3.2.5 Demonstrates the ability to interpret results of systematic reviews and meta-analyses
- 3.2.6. Determines most appropriate information to provide answer to enquiry

## **Cluster 4 Provide information**

### **4.1 Responds to queries**

#### **Behavioural descriptors:**

- 4.1.1. Generates accurate information in a timely manner
- 4.1.2. Summarises information from information gathered
- 4.1.3. Formulates answers in language appropriate for enquirer
- 4.1.4. Ensures written answers including E mails are concise, complete and referenced
- 4.1.5. Ensures verbal answers are clear and concise and followed-up with written information (when required)

### **4.2 Advises about the use of medicines**

#### **Behavioural descriptors:**

- 4.2.1. Explains therapeutic use, patient factors, ADRs, interactions & contraindications for common medicines
- 4.2.2. Provides references to substantiate information
- 4.2.3. Explains the safe use of medicines, including warnings & precautions & special storage requirements of specific medicines
- 4.2.5. Assists patients to obtain maximum benefit from their medicines/treatments participating in patient education campaigns and liaising with patient advocacy groups e.g. Irish Asthma Society, Diabetes Federation of Ireland, Arthritis Action, Irish Hospice Foundation, Addiction Ireland, Irish Chronic Pain Association etc.
- 4.2.6. Uses layman's language to explain media reports about medicines when and if they arise
- 4.2.7. Provides information on the economic impact of medicines to prescribers e.g. drugs in the pipeline

## **Cluster 5 Keeps up-to-date**

### **5.1 Keeps up to date with information on health or medicines**

#### **Behavioural descriptors:**

- 5.1.1. Uses headline prompts from sources such as NeLM or UKMI to keep abreast
- 5.1.2. Maintains awareness of changes in disease management
- 5.1.3. Maintains awareness of pharmacy practice developments
- 5.1.4. Maintains awareness of drugs in development
- 5.1.5. Responds to new information as it arises e.g. alerts colleagues or other healthcare professionals, suggests changes to clinical protocols, highlights need for SOP changes
- 5.1.6. Attends educational and CPD meetings e.g. ICCPE lectures, HPAI educational meetings, Intersivity research days, North/South Summit, or clinical conferences if applicable etc
- 5.1.7. Organises/participates in a journal club or staff educational meetings

### **5.2 Recommends changes in service delivery in response to emerging published evidence**

#### **Behavioural descriptors:**

- 5.2.1. Actively searches for research findings applicable to practice (Refer to Research element of MPharm programme, Module 7a/7b)
- 5.2.2. Initiates projects to implement changes in conjunction with tutor and/or colleagues (refer to research element of MPharm programme, Module 7a/7b)
- 5.2.3. Participates in change or organisational development projects and/or clinical audit (refer to research element of MPharm programme, Module 7a/7b)

### **5.3 Identifies research opportunities**

#### **Behavioural descriptors:**

- 5.3.1. Actively seeks research and/or clinical audit opportunities derived from MI queries, service development projects, organizational development and/or published research (refer to research element of MPharm programme, Module 7a/7b)

## **Cluster 6 Manages information**

### **6.1 Manages information**

#### **Behavioural descriptors:**

- 6.1.1. Demonstrates effective information management techniques e.g. computer files, CPD folders, specific Information management software
- 6.1.2. Records medicines information queries (according to written procedures if applicable)
- 6.1.3. Devises good storage systems where necessary to facilitate ease of retrieval
- 6.1.4. Uses referencing tools such as *EndNote* when collating bodies of evidence (cf Tutorials available)
- 6.1.5. Collate and manages knowledge and information within workplace



## Appendix 2

### References

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